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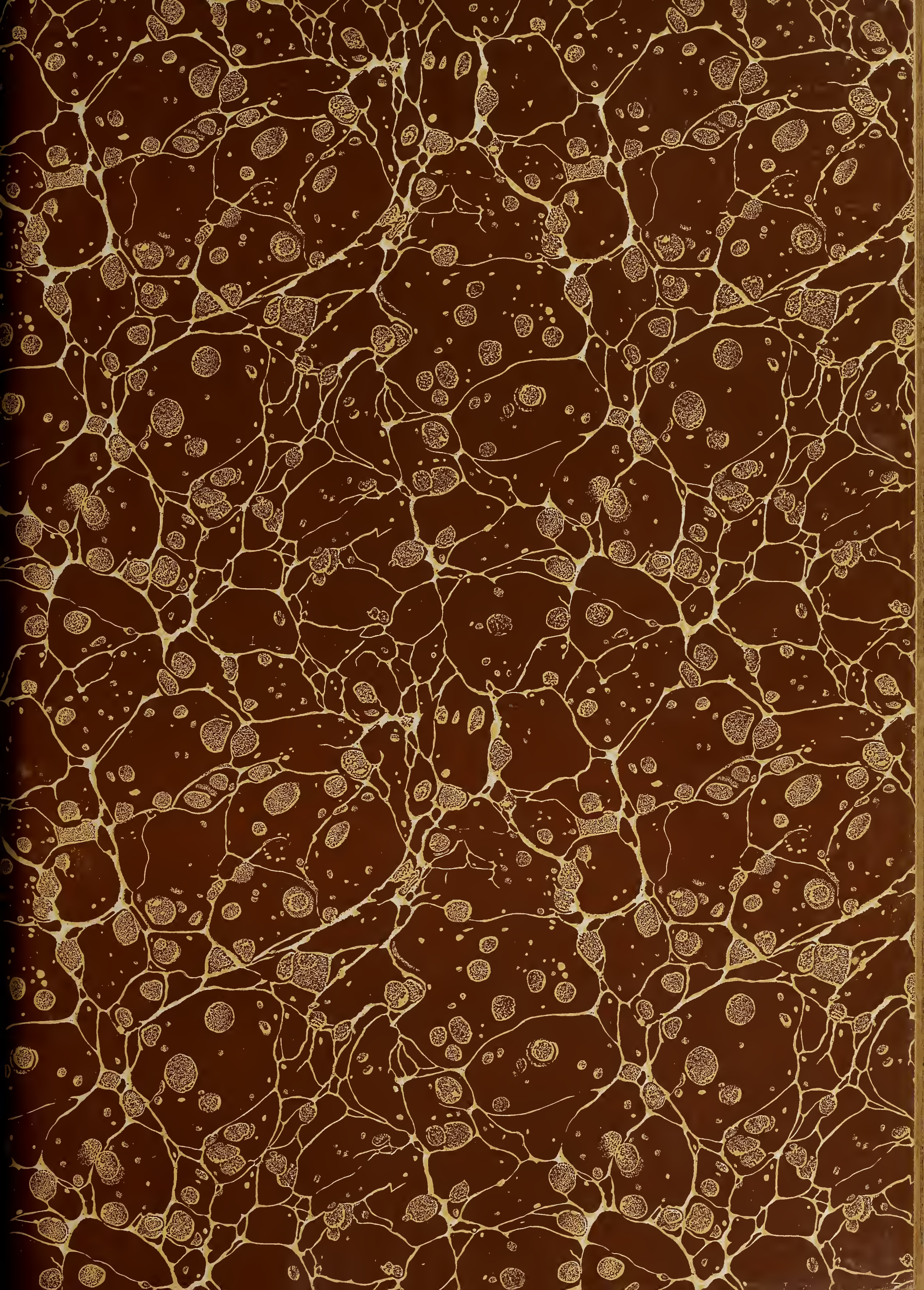
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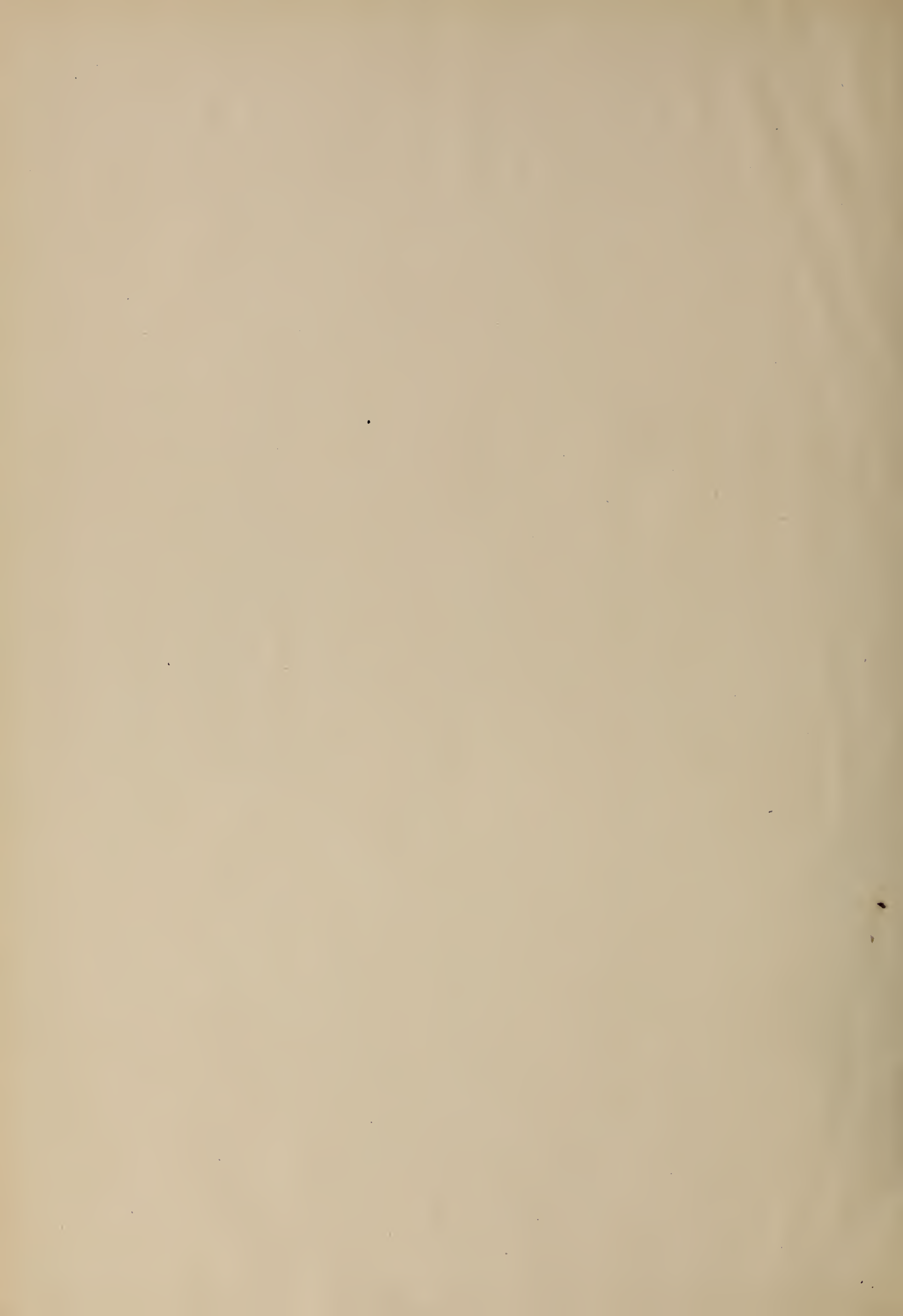
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FARM^{AND} FIRESIDE

The National Farm Magazine

JANUARY 1919

5¢ A COPY 70



What the Ships Mean to You - by Edward N. Hurley

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The Business of Distributing Medals Has Rather Got Into a Rut

By Bruce Barton

I MET him in the smoking car, and he told me he was a steel worker, on his way to find a job in one of the new shipyards. I remarked that the wages must be very large in the shipyards.

"On the contrary," he answered, "I shall be making less than I made at home—and I'll be away from my family besides.

"But I *had* to do it," he continued, and his eyes flashed as he spoke. "It's my way of doing my part—my contribution to the men that are fighting to make this a safe world for my kids."

When he left the train I reflected that this is one of the unfortunate facts of war—that it calls forth the sacrifice of the whole nation, and honors the sacrifice of only a very few.

We have the Congressional medal for the man who, in one moment of valor, hurls himself over the trench; and nobly, in truth, does he deserve it. But where is the medal for the man who, day after day, quietly, unobtrusively, does his job, as conscientiously as if the very safety of the Republic were dependent on it?

"I have talked with great men," said Lincoln, "and I cannot see wherein they differ from others."

In my humble way, I too have met some men who are counted great, and some who are counted wealthy.

And the farther I go in the world the more I distrust the mere outward signs of greatness—the titles and the bank rolls and the popular applause.

More and more I pin my faith to the spirit in which a man's life job is done.

"If God were to send two angels to earth," said Stephen Tyng, "one to sit on the throne of England and the other to sweep the streets of London, the service of the two would be equally honored in His sight."

I am not writing to reconcile men who have failed, to failure; I have no sympathy with any man who weakly contents himself with being less in the world than his best.

But I grow very impatient with the kind of talk and writing which would make us believe that there is only one sort of courage—the courage of the battlefield; and only one sort of success—the success of money, and fame.

Every man has in his heart the seeds of courage; and every man the possibilities of success.

It may be success in finance or in bricklaying; in government or in gardening. It matters not: the measure of it is the same.

And that measure consists not in wealth or titles, but in a man's own self-respect, his own deep-lying consciousness that he has, with the tools that were given him, done his level best.

There lived one time a man named Moses whose experience with democracy was not altogether encouraging.

He saved his people from slavery; and a good part of the time they grumbled at him for doing it.

"Would to God that all the Lord's people were prophets!" he exclaimed one day. By which I take it that he meant, "Would to God there were a spark of divinity in them that would make them capable of wider vision, a larger measure of self-sacrifice."

Had he been able to see a little deeper, Moses might have discovered that his wish was fulfilled: that there is in every man precisely the divinity for which he yearned.

War discovers that divinity as no other great experience can. All around me I see merchants, and day laborers, and farmers who have risen to a height of self-sacrifice which is a revelation to themselves and to all who know them.

It is our misfortune that there is no outward symbol with which to reward that splendor. The business of awarding medals has fallen into certain well-defined ruts.

Perhaps some day we shall see more clearly and reward with greater wisdom, honoring equally the sacrifice of the battlefield and the sacrifice at home.

For both are sparks of the same divinity—twin manifestations of the presence of the same great Oversoul.



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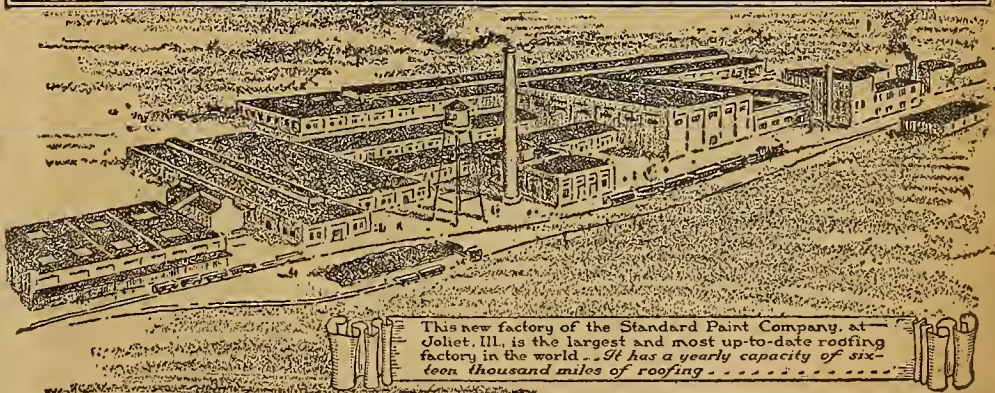


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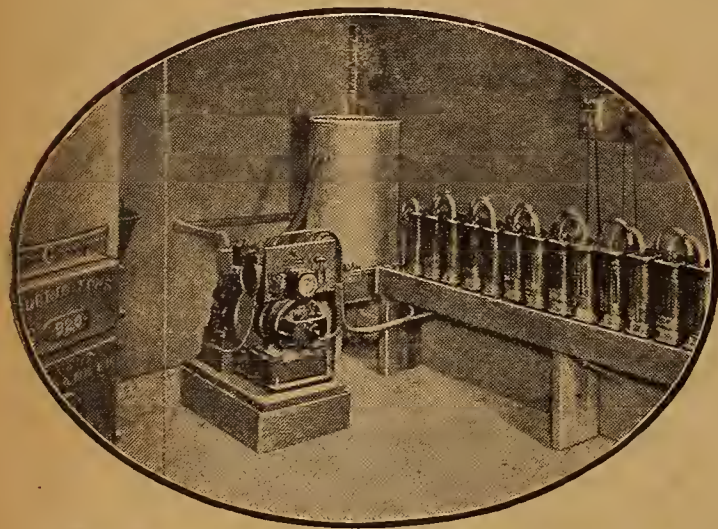
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What the Ships Mean to You

By Edward N. Hurley

Chairman of the United States Shipping Board

TO FULLY understand just what America's shipping program means to the individual farmer, when peace is firmly established, it is necessary to tell the whole shipping story from a world point of view. When it is told, I believe every farmer who reads it will see what tremendously big things it means to him.

If we had not entered the war to see it through to the finish, nevertheless we would to-day be building up an American merchant marine. Perhaps we wouldn't build such a big one as we planned on account of the war, but we would be building one big enough to do our business with the world, just the same.

When peace is thoroughly here, this American merchant marine is going to work both ways to the benefit of the farmer. It is going to enable us to get the things we need from foreign lands at reasonable prices and in our own ships, and it is going to enable us to sell things in foreign lands that we have never had a real opportunity to sell before.

Heretofore America has been in the habit of using ships that belonged to foreigners in foreign lands, and when the war came and those ships were turned to other uses for other governments, we of course felt the pinch and the necessity for ships of our own.

Just the other day I heard a man complaining about the price of bananas. "Why," he said, "I used to buy them for 10 cents a dozen; now I pay 60 cents. Is there any sound reason why the war should raise their price? Certainly we're not shipping them to our forces abroad!"

No, we're not. But the ships which used to bring them from the tropical plantations to America have been pressed into service for transport and supply-ship duty—50 per cent of this fleet; in fact, every bottom capable of making transatlantic trips.

We've been rigidly rationed as to sugar, not because there has been a sugar shortage, but because there have not been enough ships to transfer the tremendous stores of it in Porto Rican and Cuban ports.

Higher prices to consumers for some of the commonest articles of food have not in the majority of cases been the result of crop shortages, but the direct result of pyramiding freight rates growing out of the dearth of tonnage. From three-fourths cent a pound, the freight on China rice has climbed to three and one-half cents; the freight on coffee from Brazil is no longer one-half cent a pound, but three cents. Tens of thousands of tons of hides which we have imported in the past for making shoes have been lying dormant in Oriental ports simply because there were not the ships to bring them here, nor have there been the ships to bring in materials for tanning.

Hemp from the Philippines comes into our ports carrying the burden of more than a thousand per cent increase freight tariff; our cotton industry knows too well what mounting freight rates on Indian jute have meant to consumers of manufactured goods from bales of cotton shipped in jute coverings.

You can multiply this list of illustrations over and over again. In the end you will realize two things: that as a people we are dependent upon other peoples for a tremendous proportion of our necessities, and that because of this there is ample justification for the building of a powerful American merchant marine, war or no war.

But in the past we have ignored the first, and consequently never thought of the second, because there have been other ships afloat to do our shopping and trading for us, and we have left it to them. Before the war only eight per cent of American foreign trade was carried in bottoms flying the Stars and Stripes from their mastheads. This means that, while our export trade never had been more than partially developed, we allowed it to stagger along under the tremendous burden of well-nigh excessive freight rates, unsatisfactory schedules, and allowed our imports to bring with them a tremendous national debt composed of freight charges.

Then came the war, with the seas heavily infested with U-boats, when hundreds of thousands of tons of neutral merchant tonnage were tied up in ports, when Britain's magnificent fleet of merchantmen was engaged to the last bottom in carrying strictly war essentials to British ports and to its hundreds of military bases. We were left



Edward N. Hurley. He was born at Galesburg, Illinois, and his home now is in Chicago

WITH the coming of peace the American ships built to help win the war will be turned into thousands of miles of new railroads connecting American farms with all the markets of the world.

That's what these new ships are—railroads over the high seas. And every time a new boat slides down the ways with the Stars and Stripes flying from its mast, the farmers of America ought to stand and cheer. It means money in their pockets.

When one of the transcontinental lines runs its tracks through an untapped section of the country, the farmers there get all excited, values jump, towns spring up, and there is great rejoicing, because of the new markets that are opened up.

Just because we can't see the section gangs laying the ties is no reason why we shouldn't appreciate the significance of these new railroads the Government is building.

America's shipping program spells increased demand, better prices, and greater opportunity for expansion than we farmers ever had before. Just how this is going to work out you will learn by reading Mr. Hurley's article. We believe it will convince you, as it convinced us, that the peace-time mission of these ships is one of vital personal interest to every farmer.

THE EDITOR.

high and dry. And the submarines began to take their toll of the world's shipping—more than two million tons to date.

This opened our eyes, for with every ship we could pipe up, our fleet of merchantmen was not equal to the task of supplying our normal needs with regard to imports, particularly of raw materials.

We needed Spanish pyrites for the manufacture of sulphuric acid, which, among other uses, plays a tremendous

rôle in the production of our phosphatic fertilizers; there were not the ships to bring these. We needed tens of thousands of tons of Chilean nitrates for fertilizer; what with the ship famine and automatic increase in freight rates, there has been a nitrate famine here and a consequent mounting in the cost of production of every crop requiring those fertilizers.

Australian wool has been cut off from us; the result has been the requisitioning of our domestic supply by the Government to guarantee the production of uniforms for our army and navy. The civilian must wear shoddy. Our home and commercial canning industries have been severely threatened because of the famine in pig tin, a product absolutely essential to the manufacture of tin cans.

And while we were struggling along to find a way out of this economic dilemma, the black threat against human liberty compelled us to throw our entire economic and military might into the fray, demanded that we translate the President's message to Congress into millions of fighting men, millions of tons of supplies and food to sustain the better half of the world through the ordeal. And all these things to be shipped four thousand miles overseas despite the fact that we had no merchant marine!

We seized enemy shipping interned in our ports, bought every neutral bottom we could find, arranged with our allies to spare us every bottom that could be spared strictly for transport of food, men, and munitions. And then we turned our backs upon every mistake we had made in all the years of peace and laid the foundations for a merchant marine second to none in the world!

From practically nothing we bid fair to have afloat by the end of this year more than twenty million tons of merchant shipping—a fleet as great as England's at the outbreak of the war. Excluding the fleets of ocean-going tugs, and the 850,000 dead-weight tons of steel, wood, and concrete barges on the program, we have planned for more than two thousand ships. To-day they are sliding from the ways all over the United States.

Germany miscalculated. Upon the crippling of the world's available tonnage she depended for winning the war. She overlooked the possibility of a contented, non-maritime nation like America suddenly erecting shipways at every possible port, standardizing the materials and building methods for these ships, and launching them at a rate heretofore unheard of.

These ships of ours, combined with the fleets of our allies, have become the common carriers of democracy. They helped win the war by stretching our sinews of war across the seas. They will serve humanity as long as the war need lasts; they will continue to serve it through the years of peace.

We must look ahead to those peace days. We have demonstrated what we could do in the hour of emergency; it rests with us to project the same energy and enthusiasm into the peaceful courses of world trade. Our ships will not be sent to sea for any selfish service, any more than they are serving a selfish end to-day. In the future they will serve the commerce of the world.

We have had it brought home all too vividly that we are no longer a nation apart from the rest of the world; we have paid the price of neglect and indifference to our best welfare when we delegated our ocean shipping to others more farsighted. We never again want to be found in such serious straits as we were found when the war diverted foreign-owned ships from their established trade routes and left us without this and that raw material except at super-famine prices.

The first duty of any nation is to help itself. We can and will do this in the future by taking our place on the trade routes of the seven seas and on our own ships. And while we are doing this, we can and will serve foreign markets with the products of America.

"Shipbuilding," says Vance McCormick, chairman of the War Trade Board, "will enable us to fulfill in liberal measure our obligations toward our allies and to friendly neighbors in Latin America who are dependent on the United States for so many of the commodities required for their well-being or comfort, and for whose products the natural market is in such large measure offered by this country."

[CONTINUED ON PAGE 11]

Have You Been Swindled?

There are some very attractive—and very crooked—stock propositions afloat now that have trapped some pretty wise men

By Frank G. Moorhead

IT WILL pay every American farmer big dividends to be mighty suspicious of any persuasive stock salesman he may chance to meet these days. These wily fellows are reaping a golden harvest among us, and this article is aimed to show up the most lately developed tricks of their trade.

No matter how interesting and promising the proposition he puts up to you, it is a good idea to consider the stock salesman guilty of having crooked designs on your pocketbook until he is proved innocent.

Don't trust him even if he comes to you with a letter of recommendation from the local banker or business man you have been dealing with for years. Bankers and business men are often as easily duped as anyone else. Even if some banking or business associate of yours appears on the fellow's stationery as secretary-treasurer or some other official of the company, sift the proposition very carefully before you invest.

I know of a case where a group of these grafters organized a fake company with \$10,000 capital stock, went to the leading banker of a certain community, pulled the wool over his eyes, and not only got a letter of recommendation from him, but also got his name on their card as secretary-treasurer of the company, with the net result that several of the farmers and local citizens he had been dealing with for twenty years were defrauded of thousands of dollars. They invested in the worthless stock on the strength of their friend's name as a member of the company.

I know of another case where a small town banker was bought outright for \$5,000. In short, he sold out his friends to this gang of stock promoters for that amount of money.

A pretty good rule to follow, if you don't want to lose several hundred dollars to one of these crooks, is to get a Dun or Bradstreet report on the company, or look it up through the U. S. district attorney nearest you, or wire or write the financial editor of "The Wall Street Journal," or "Forbes Magazine," New York, and ask where you can get a report of the company. A dollar, or even five or ten dollars, spent in this way may save you hundreds.

The fact that you, as a farmer, are apt to be tricked by one of these crafty stock salesmen doesn't necessarily imply that you are easy. Remember that they spend their lives and all their talents and energies in figuring out ways to snare your dollars. Your business is farming, not stock-jobbing, and the only safe way to deal with the stock salesman is to prove him up in the financial world.

There are good, legitimate stock-selling propositions for the farmer to put his money into, but they aren't usually sold by men traveling from farm to farm or opening temporary offices in near-by towns.

And just because you have escaped the wiles of one bad salesman don't relax your vigilance for the next one. Crooked stock salesmen are like weeds: no sooner have you trimmed one variety out of one field than another variety crops up in another field.

There is a very bad variety of stock salesman abroad in the land to-day. He appears in many guises, but usually with a black leather portfolio under his arm. This portfolio contains a glittering prospectus well-nigh exhausting the dictionary of superlatives, and always a commendatory letter from a well-known banker. His right hand is extended in glad greeting. He can afford to be well pleased; he is keeping \$25 out of every \$100 which the farmer gives him. And the farmer who isn't careful is giving him his money by the millions of dollars.

Enjoying a prosperity greater, perhaps, than any other man, the farmer has been singled out as the particular victim of the unscrupulous stock salesman and promoter of to-day. The very patriotism of the farmer is one of the reasons why he is being systematically worked. Answering the call of Uncle Sam for money with which to carry on the war, he has dedicated millions of bushels of \$1.50 corn and \$2 wheat, hundreds of thousands of head of \$18 steers and \$19 hogs, to the purchase of Liberty bonds. The stock salesman seeks to clinch his alluring argument by stating that the farmer has already done his duty to the Government by taking his full share of bonds bearing only 3½, 4, or 4½ per cent interest, and that now is the time for him to trade these low-interest bonds for stock in a company which is sure to pay 20 or 25 per cent the very first year, with no limit to the possibilities later on. It is to be wondered at, and yet it is true, that hundreds of thousands of farmers throughout the country al-

ready have fallen victims to these unscrupulous salesmen.

For even if their stock were worth what they claim, the luring of Liberty bonds from the farm strong box would be reprehensible. But few of the stocks offered for general investment are worth much more than the paper they are printed on, notwithstanding the gold seal, the Spencerian flourishes of the president and secretary of the company, and the attractive picture which usually adorns the left-hand upper corner of the stock certificate. The methods of organizing these companies and exploiting them are reprehensible in the extreme. Already there

the Midwestern States has recently admitted that he has been offered between \$75,000 and \$100,000 in the last twelve months for the use of his name as a stockholder or for a letter endorsing the men behind the promoted companies. This particular banker has turned a deaf ear to every offer; he knows for a certainty, however, of rivals who have turned down none.

There are various ways in which the banker's endorsement may be used: he may figure as treasurer of the company; he may write a letter saying he has known the promoters all his life, and considers them highly honorable men; he may simply pose as the ostensible owner of a block of stock, so that the salesman can go about through the country saying, "Mr. So-and-so, president or cashier of the Such-and-such Bank, is a stockholder in our company; he is deeply interested in our company; he has great faith in the outlook." There are instances known where stock salesmen have even used the names of bankers who had positively turned them down, until the fact came to the bankers' ears and they protested against such open duplicity.

The preliminary steps are now all taken. The company has been organized; it has been given a name; it has secured the aid or connivance of a well-known banker. The next step is formally to incorporate the big concern thus born, and then have the company thus incorporated enter into a contract with the men who gave it birth to sell the stock for a generous commission, usually twenty-five cents on the dollar. In brief, the men who originated the company—not out of whole cloth, for even that is not necessary, but out of blue sky—contract with themselves to sell the stock which they thus created, paying themselves one fourth, at least, of the money taken in from the investors. Then the battery of cars starts out through the countryside, a trusted promoter at each steering wheel, and men are called from the fields where they are plowing or reaping, and

from the feed lots, to lean over the fence and listen to the alluring talk of the promoters, who tell of the fortunes of Rockefeller and Morgan, of Carnegie and Gary, of Schwab and Astor, and make such glittering promises that it is a hard-headed, tight-fisted old miser, indeed, who is not impelled to give the horses a rest in the shade while he signs his name to the stock application and to the notes which turn up, with unfailing promptness, at the local bank for collection.

Nor must anyone think that this account of the organization and exploitation of companies offering their stock to the general public nowadays is exaggerated. In the first five months of the year more than four hundred companies were incorporated in one of our large Midwestern States, where the rural population exceeds the urban, and immediately began the sale of their stock.

A half-dozen of these companies were incorporated for two million dollars, a score for one million, dozens for a few hundred thousand dollars. This particular State has a "blue sky law" upon its statute books, but it applies only to corporations organized outside the State; it fails to cover companies organized within the State. And it is not a bit difficult for stock salesmen to drive their high-powered cars from one State to another and start new companies just as

rapidly as printing presses can turn out new, and different, certificates

Instances are known where stock in three ostensibly competing insurance companies, in one State, has been sold by the same gang of promoters. The application blanks and the stock receipts are identically the same, save and except for the name of the company. Aside from that the same blank sufficed; the men were not even obliged to use their gray matter any in writing out new forms; in fact, the greater part of their work consisted in endorsing the farmer's checks for deposit.

An instance is known where a company was incorporated with a million-dollar capital, and promoters were hired to go out among farmers and sell the stock on a commission basis, receiving \$25 [CONTINUED ON PAGE 30]



has been enough of a falling-out among the rascals to show that the methods generally employed are along the following lines:

As a rule, only three or four men are involved in the original inception of these companies. These men, meeting in the privacy of a city office, behind closed doors, form themselves into a company with a nominal capitalization of, say, \$5,000 or \$10,000. They have nothing to sell, no invention to put upon the market, nothing to add to the productiveness or wealth of the state or the nation. They simply form a company; that is all they feel called upon to do.

The next step—and the first really important one these days, even if it were not in the South Sea Bubble days in England—is to select a good name, a high-sounding name, one in which the word Mortgage, Investment, Insurance, Trust, or Guaranty shall appear, for these are good, substantial names and carry weight.

Having selected the name—frequently it has been positively disclosed, with many a laugh, behind closed doors, at its sonorous and dignified sound—there remains only one more step and the work of these men is finished: they must interest a well-known banker in their scheme. The banker is absolutely necessary; the company, whatever it calls itself, cannot proceed a step without him. Why? Because the company needs money, and it cannot get money without the banker's aid. So the organizers step into their high-powered automobile and drive over to see the chosen banker in his private office. He lends a listening ear. They talk glibly of the name of their company and prate of the big deposits that are sure to result in his bank. Perhaps they do not beat about the bush or make any pretense of being honorable or useful. They simply bid for the banker's name or endorsement, and money talks. Sometimes the entire \$5,000 or \$10,000 which the incorporators got together to start the ball rolling is handed over, intact, to the banker for a letter of endorsement or the use of his name as treasurer of the company. The president of a national bank in the capital city of one of

THIS article has a message for your pocket-book. The information in it has saved some American farmers thousands of dollars; and lack of it has cost others hundreds of thousands. We farmers don't have to be "easy marks" to be tricked by crooked stock salesmen. They are smart fellows who devote their lives and talents to figuring out ways to get our cash. The only way to beat them is to keep in touch with their latest improved methods of crookedness, just as we keep in touch with the latest improved methods of farming. It is an article like this that keeps you in touch with those methods. Read it!

THE EDITOR.

Why I Came Back to the Farm

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The story of one of America's rural leaders who hated the old home place when he was twenty, and loves it now he's fifty

By S. J. Lowell

MAY be vastly mistaken, but I don't believe any man ever becomes a real, genuine farmer until he is forty years of age. There are a few, I suppose, who do, but the "born farmer" is the exception, just like the "born poet," or the "born inventor," or the "born machinist." Therefore I don't think there was anything unusual about my dislike of farming as a young fellow. I don't think many young fellows just naturally take to farming, almost from the cradle you might say, like a duck to water. That is proved by the great exodus of young people from the farms every year, and the result—cry from time to time of "back to the soil." These young folks grow up with the idea that they don't want to farm; they want to do something else, though they don't know exactly what. And so they leave.

I know it was that way with me, and I am writing these pages from my own experience, in the hope and belief that they will explain to some parents their children's desire to leave the farm, and to the children some of the wonders and opportunities for success and happiness that lie right at hand on the farm if they just have the patience and "stick-to-it-iveness" to work and grow toward a full appreciation of them.

Of course, I know that there is not the incentive for young folks to leave the farm nowadays that there was when I was a boy. The telephone, rural free delivery, community clubs, the automobile, electric lights, modern houses, and general prosperity of farming nowadays have done away with a lot of the unpleasant features. But still there exists, in perhaps a greater degree than we appreciate offhand, that urge in the breasts of young folk to get away to the town and the city where things are livelier and more exciting. Not always is this true, but it is so in enough cases to make worth while the giving of a few real arguments against it—arguments that even impetuous youth can see the logic of.

One thing most of us are apt to forget is that farming is a business, just like tinsmithing, or store-running, or manufacturing; that it is also a profession with many technical branches, like medicine and surgery, or law, or engineering; and it is one of the hardest businesses to learn and to excel in, and takes more study and work than almost anything else. And, also, it yields more in health, happiness, cash and contentment, in proportion to the work and study devoted to it, than anything else.

That is what I mean by saying that the average man does not learn to be a real farmer under forty. He has to serve a longer apprenticeship at a more complicated trade than other men do. But I'll bet anything that if you would take all the men in the United States over forty, line them up in a row, and ask them whether they consider themselves happy and successful, you will find a larger percentage of "Yes" among farmers over forty than among any other class of men over forty.

Personally, I am sixty, so I have had twenty years to think this thing over, and forty years before that to work it out. And let me say that during those forty years I covered all of the main roads and most of the byways. It is doubtful if there ever was a more discontented, roving, fretful, impatient disposition than mine.

Yet to-day, when I go to cities and towns and mingle with all kinds of people in all kinds of affairs, they cannot understand why the Lowell family sticks to plain living in a house set down in the open country.

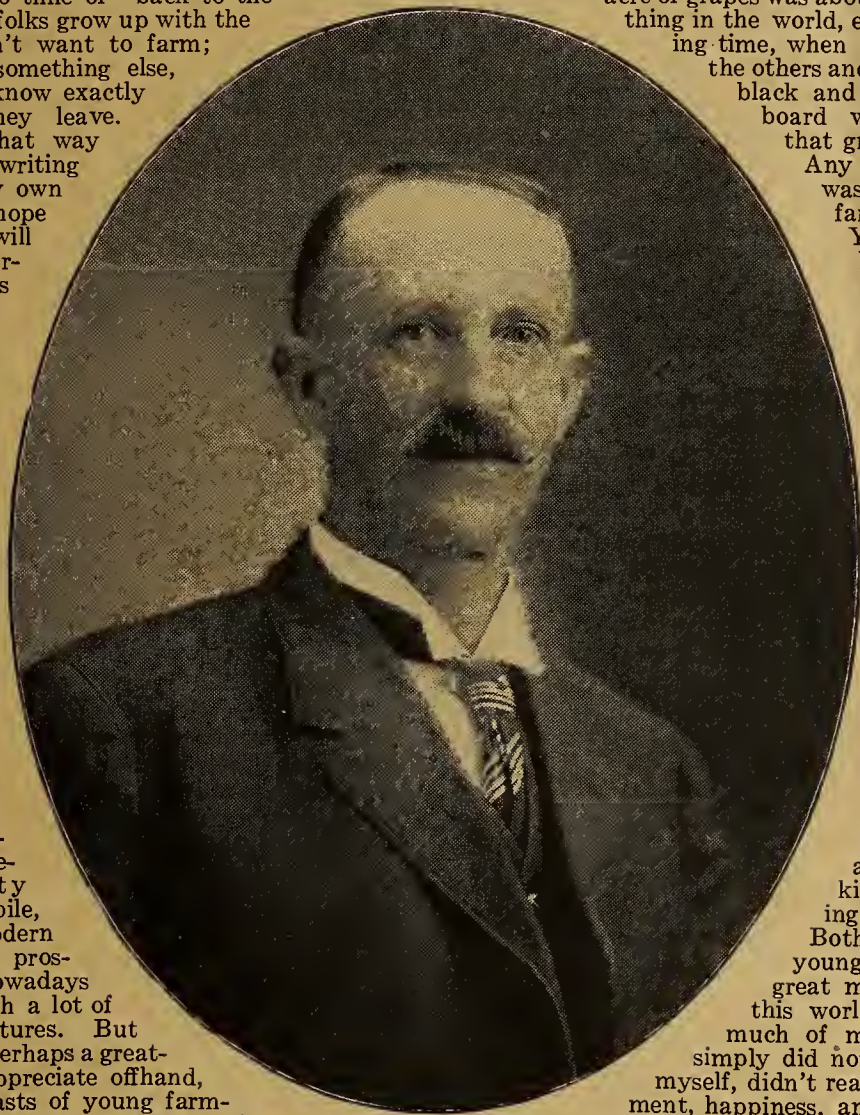
Only a few days ago I was talking business with a man one of the larger up-state towns of New York. Toward the close of our conversation he said:

"And what is your home town, Mr. Lowell?"

"Oh," said I, "we don't live in town."

"You mean that you still live in the country altogether; that you have no place in town?"

He was assured that such was the case, and he could not understand it. But I can understand it. Just as I despised the farm for the first thirty years of my life, so I love it now. I wouldn't live in a town if you gave me one. The



simple answer, and one which it is difficult for those who have not had the experience, to understand, is that in the ten years either side of my fortieth birthday I learned to appreciate what a wonderful place the country really is.

As a boy, on the old home place up near Fredonia, everything I did was drudgery. I hated the stock and the barns and the fields. A cow was nothing to me but a pest, a stupid animal forever bawling around and getting into forbidden places and having to be chased out. A flock of chickens was just a lot of brainless birds which laid eggs that I had to tramp around and gather. And an acre of grapes was about the most detestable thing in the world, especially about graping time, when I had to go in with the others and get my hands stained black and my clothes stiff as a board with the stick-tights that grew between the vines.

Any place in the world was preferable to that farm, it seemed to me. You never saw anybody, you never went any place, and you never had any fun, anyhow. That was my complaint, principally. Of course, I got a fair district schooling, but the associations I had among the other farmer boys and girls there merely whetted my appetite for more thrilling adventures in other parts of the world.

I remember distinctly that my boyhood dream was to run away to the city and be a machinist. I had visions of myself bossing a busy shop where all kinds of things were being made.

Both as a boy and as a young man I was like a great many other people in this world: I couldn't stand much of my own company. I simply did not get acquainted with myself, didn't realize that real contentment, happiness, and success come only to the man who can find things within himself to think about and work on, that every human being, to amount to much, must live *himself* instead of trying to make others live *himself* for him.

You have seen people who did that, men who got their opinions of things from others without once stopping to think about a thing for themselves and find out what their own opinion was; men who could not bear to be alone where they had to reason things out for themselves, and go ahead and do things without the say-so of someone else.

The consequence was that I whooped with joy when the time came that I could get away from those deadly dull acres of the old home place. I rushed madly for town and the voices and activities of fellow men, being blind, deaf, and dumb to the far more real, fascinating voices and activities and friendships that beckoned me on the farm.

It is said that extremes beget extremes. And I guess it's true, because when I got to town I took the noisiest, loudest, blaringest part in the community life I possibly could. I played in the band—and thoroughly enjoyed it; enjoyed it so much that I kept at it for eight years.

My idea of real life and a good time was the same idea that so many thousands of young men have—the idea

that a lot of drinks and plenty of loud conversation about particularly unchoice subjects, coupled with chasing here, there, and everywhere, and doing this, that, and the other, can possibly take the place of deciding definitely what really useful thing you want to do, then setting about quietly, cheerfully, and earnestly to do it.

There was practically nothing in the category of useless things that I didn't do, and practically no part of the eastern United States that I didn't cover in doing them before I realized that I had deliberately, nay joyfully, walked away and left the only thing in the world that I really wanted to do and could do, which was—to farm. I cut timber in Pennsylvania, having a "good time" the while with the very rough gang that made up my associate timber cutters; then I played semi-professional ball, spent some time as agent at large for a basket works, more time as the same for a fertilizer company, and still more time in a dozen and one other occupations too numerous to mention.

But even with all that behind me I hadn't learned my lesson. I knew that I wasn't getting anywhere in particular, but it never once occurred to me to pick out something definite and settle down to it. This decision, a very important one and one which should be made voluntarily by every young man, was literally forced upon me. I *had* to get back to farming and buckle down. And I hated it as much as ever.

Very gradually my dislike grew less. And little by little I began to get acquainted with myself and with the wonders that lay in abundance all round me. At last it was dawning on me that there was romance and discovery and possibilities for marvelous invention and progress in lands and crops and stock.

I think the first thing that opened up this new vision of farm life to me was an eccentric old vine among the grapes. This fellow was one of the greatest fakers that ever lived. He fooled me for several years with his tricks, and I couldn't help comparing him with a certain human being I had known. He would start out every spring with the other vines, strong and brave, making me all kinds of promises about the grapes he was going to bear. He would grow the most marvelous suit of leaves and get himself all dolled up, fit to kill, for all the world like a confidence man in real life; and then, just as sure as graping time came, there he would be without a grape. Well, I finally cut off his head and grafted on another that was on the square and would grow real grapes without any bluff or bluster.

As time went on I got acquainted with other folks in the vineyard. There was one puny, gnarled little fellow who didn't look strong enough to do a tap, and yet every year up he would come with his twisted arms so full of grapes he could hardly carry them. I have known men just like that vine—wiry, frail-looking things, but hard workers and great producers.

With this as a beginning, my acquaintance with my farm family grew and prospered day by day, spreading to trees, and flowers, and animals, to garden truck and to everything else around the place. There grew up within me, along with this acquaintanceship, a sort of fatherly interest in all these struggling friends, and in the crooks and grafters and shirkers as well as in the steady old wheel horses in all branches of the farm's life. I got to feeling that these plants and animals would show me very clearly, if I would just look, when they were happy and contented and properly taken care of, and when they were miserable and neglected. *That* is the feeling that makes a man a *real* farmer at heart. No man ever got it by hating his farm. Any man can get it by getting acquainted with his farm.

There is something very worth while in the knowledge that you personally control the destinies of the fruits of so many acres. It is both a responsibility and a joy to know that you are the master of these living, growing things.

From this point I took another step forward. I think this step came with the realization that the cow I had hated so thoroughly as a boy was really one of the most marvelous creatures of the age, and that it was farmers like myself who had made her so.

You know you often hear the farmer maligned as the slowest mortal on the face of the earth. Folks say he is not progressive, that he travels along a rut. The cow, the chicken, the apple, the fine [CONTINUED ON PAGE 25]

S. J. LOWELL is one of those men who get through a tremendous amount of work without seeming to work very hard. We were up to see him at Fredonia recently, and, honestly, we don't see how under the sun he manages to be one of the biggest and best grape growers and still keep things humming as master of the New York State Grange and as a dozen other important things. But he does. He has been keeping up this lick steadily for eighteen years now, and he looks good for many years more.

In 1905 Mr. Lowell was elected master of Grange No. 1, in his home county, the first Grange ever organized, and hence the granddaddy of them all. He is a power in the agricultural affairs of New York State, and the East generally. This is evidenced by the fact that he was elected a member of the National Grange Executive Committee a year ago last November. He is also a member of the New York State Wood and Fuel Commission, and there hasn't been a state commission on anything agricultural for years that he hasn't figured in.

But for all the fun he gets out of farming and Grangeing, he gets more out of living at home with his family. Mrs. Lowell and the two boys keep the home fires burning during Mr. Lowell's frequent trips for the Grange.

THE EDITOR.

Look Out for Pneumonia in March

Highly dangerous at all times, it is especially so in November and March, particularly in the South

By John B. Huber, A. M., M. D.

THE GRIPPE, pneumonia, and "Spanish influenza" epidemic which swept this and other countries during the fall and early winter make it peculiarly desirable that everyone—including those on the farm, yes, indeed—should know as much as possible about these diseases and how to ward them off.

There seems to be a feeling among farm folk that because they live in the open country they are not apt to suffer from diseases which become epidemic in crowded towns and cities, where dust and dirt harbor billions of germs. But I want to tell you that it is just as easy to get sick on the farm as it is in the city. Sometimes it is easier.

It is not your geographical location that makes you immune from disease. It is your physical condition, and the conditions existing in the house in which you live. And it is just as easy to prevent or to catch disease on the farm as in the city. The same precautions will prove equally effective in both places.

Farmer folk are not altogether free from pneumonia; and as the country air is generally considered freer of germs than city air, one wonders how anybody in the country could suffer an attack of pneumonia. I will tell you.

One winter night I stayed in a northern New York farmhouse. The people were good, clean, decent people, and very prosperous. Their home was well constructed and comfortable, and their scale of living was above the average. But when I went to bed I learned some things about that house that went far to explain how I happened to be called there.

I was taken to the guest-room, and, as I always do in the city, I prepared to open a window for the night. Imagine my despair when I found that all four windows in that bedroom were nailed down beyond any power of mine to budge them.

Being used to sleeping in the fresh air, I therefore spent most of that night either dreaming horrors or meditating over my mis-spent past. In addition to that, I nearly suffocated. All in all, I had a very bad night of it. In the morning I understood, so far as that particular farm was concerned, the saying that the country air outdoors is so pure. The people there kept all the bad air in the house.

I have since learned that it is a common practice among farmers to nail down the bedroom windows come November, and keep them that way until spring. That kind of existence is not really living at all: it is just hibernating, bear-like; and the result is enervated bodies which become ideal abodes for pneumonia, consumption, grippe, and many another kind of germ.

It is by breathing fresh, clean air, and living fresh, clean lives, day and night, that we avoid pneumonia and other diseases.

Pneumonia is also called lung fever, because the disease settles for the most part in those precious organs by which the breath of life is supplied to our bodies. But we have here really to deal with a general infection (that is, a "catching" malady); and sometimes, besides the lungs, other organs are gravely involved because the germ and its poison (its toxin) reaches those organs by way of the lymph and blood channels. That is why, after recovery takes place, we have to be content for a long convalescence. For the heart may continue to be very weak, dangerously so, perhaps; or the kidneys may be acting so badly that chronic disease of those organs may supervene; or the digestion may become seriously impaired.

Pneumonia has an enormous death rate. Sometimes, and in some localities, this exceeds the death rate of that disease which since the beginning of human history has been considered the Captain of the Men of Death—the name John Bunyan, who wrote "The Pilgrim's Progress," gave to consumption. Pneumonia, or pneumonitis, is of very wide distribution, existing in all of our States and probably prevailing more in our Southland than in the North.

Long before its germ was discovered doctors realized—

they just "sensed"—pneumonia to be a catching disease. They knew certain houses, barracks, jails, schools, to be its favorite habitations. When we consider how it is contracted we have to take into account two kinds of causes: First, the specific or the essential cause, the berry-shaped, microscopic germ which is called by doctors the pneumococcus, which was discovered by Dr. Frankel, and without which pneumonia cannot exist. And, secondly, we have to think of those agencies by which the body becomes weakened so that it cannot resist the onset of the pneumococcus.

The pneumococcus, like the germ of grippe and of several other diseases, is found by examination under the microscope in the secretions from the nose, throat, and lungs, in the saliva and in the "rusty sputum" coughed up by the sufferers; and it persists for weeks or months in the upper air passages of pneumonia convalescents. It is only such discharges—not the breath of the sufferer—that are coughed or sneezed or spat out which are the infectious agencies. Against such material we must guard, and if this is properly done there is little danger of infection to those who are in ordinarily good health.

One thing which gives the doctor a lot of worry is that the pneumonia germ in many cases becomes mixed with the germs of other diseases. That is what happens all too often in the so-called "Spanish influenza" epidemic. And so complications arise. Instead of a frank, straightforward case of pneumonia, we may therefore have to deal with pneumonia and grippe, or pneumonia and pleurisy, in which event we have to fear the development of consumption later, for most cases of neglected pleurisy "turn into consumption"—or the pneumonia may be secondary to grippe, which is all too often so nowadays. Or heart disease, meningitis, peritonitis, typhoid fever, or diphtheria, or some other inflammation, represented by its respective germ, present at the time in the body, may be secondary to or coincident with the pneumonia. Such "mixed infection" will all too often make very serious a disease that might otherwise not be so. That is why some cases of pneumonia are practically hopeless, while others recover quickly, safely, and pleasantly—*cito, tuto et jucunde*, as the old doctors used to say.

And now about the predispositions to pneumonia. Men are more likely to suffer than women, no doubt by reason of the greater physical hardships and outdoor exposure which most men endure in life. During the winter months—but especially when the weather is changeable and unsettled, as in November and March—there is much pneumonia: During a long and even stretch of moderately cold

weather the disease is not, however, suffered so much.

Cold and wet, especially when the extremities get chilled, lower the vitality, and so make the body susceptible. Cold alone does not engender pneumonia. Arctic explorers have been amazingly free of lung fever while breathing the germ-free Arctic air; but when they have returned to civilization, where the germs are, they have been as like as anyone to suffer.

A tired body is easily susceptible. Unhealthy conditions of the nose and throat—catarrhs—help bring on lung fever. An injury to the chest, such as a hard blow, may invite the disease. John Barleycorn is in many cases at fault, and an "alcoholic pneumonia" is a pretty well-nigh hopeless case. All too often pneumonia is a terminal affection where there is heart, stomach, or liver trouble, hardening of the arteries, Bright's disease, diabetes, or some other serious malady. Many of our elderly people suffer thus of "pneumonia of the aged." It is indeed an odd experience in medicine that many of us do not die of the ailment by which we have suffered most; secondary affections carry off most sufferers from incurable maladies.

Bronchitis sometimes precedes, for several days, an attack of pneumonia. In most cases, however, the invasion is abrupt, with a severe chill, lasting perhaps an hour, and with a sudden oncoming of high fever and rapid pulse.

Within a few hours there comes an intense, sharp pain in the lower part of the chest, and on the right side in most cases. This stabbing pain is increased by breathing and coughing. Then the sufferer's cheeks become flushed, his expression anxious, his nostrils dilating. I will not here describe fully the symptoms—enough only for the farmer to realize that in such a case no home remedies will do that the doctor has to be summoned at once. Until he comes put the patient to bed.

There must be a day and a night nurse, for even in the favorable cases there may be sudden heart failure or stopping of the breathing. Fatalities have resulted from sleeping, tired attendants, however anxious to be faithfully relaxing their attention for but a few minutes.

The patient's mouth is kept clean; water or cracked ice is given in abundance; the diet is milk or broth, with perhaps eggs. Everything possible is done to preserve the sufferer's strength; unnecessary movements are prevented. Sleep is of great value; but the position has to be changed from time to time, very gently, so that there will be no "hypostatic congestion" in the most dependent parts of the lungs. Sponging with cold water, or alcohol and equal parts, or vinegar and water equal parts, lowers the fever, relieves the nervous symptoms of the delirium, improves the heart action.

How shall we prevent pneumonia? In the first place, predispositions have to be guarded against—an easy thing to say but very hard to put into practice for the body; for in this anxious, workaday world it is impossible to remove all the agencies which weaken the body and lay it open to germinal attack.

Perhaps I could give no better advice than that you keep yourself in as good physical condition as possible. The better a person's general health, the less liable he is to fall victim to any disease, because a good, strong body which gets plenty of nourishment, fresh air, and exercise will fight off diseases to which a weaker organization will easily fall victim.

As to the germ itself, we must proceed much as we do against the germs of consumption, grippe, and all other maladies in which the upper air passages are the infection centers, the lurking places of the respective micro-organisms. The sputum is invariably cast into a vessel containing fluid, which vessel is invariably scalded when emptied.

Those who nurse pneumonia patients must keep their mouths and throats very clean, by means of dentifrice and gargles. A good mouth cleanser is a normal solution (half a teaspoonful of table salt to a tumbler of water as hot as can be borne), or a glass of water in which a few drops of tincture of iodine are placed. The hands should be washed frequently with soap and water after each ministrations and invariably before meals.

After recovery the home is thoroughly disinfected. But use only fresh air and the dear Lord's sunshine—natural disinfectants, better than any others and making the use of others unnecessary. Fresh air, the sunshine, soap, water, and lots of elbow grease will assure against further cases developing.

Remember that it is only the discharges, and not the breath of the sufferer, which are contagious. Therefore, when coughing, sneezing, or spitting, a cloth or a handkerchief must be put in front of the sufferer's face. Cloths that can be burnt are right.

Those who do not need to be with pneumonia patients had best not visit them, certainly not people worn out or otherwise susceptible. On the other hand, there is no reason for ignoble fright as if the plague were about.

A special word at this time about grippe: Pneumonia and the grippe are the two diseases especially prevalent in the winter months. Plain, Spanish, or Russian grippe—they are all the same—is an epidemic disease which spreads with great rapidity. The specific germ is bacillus influenzae. Cold in the head is generally the beginning. Then there are pains all over, especially in the head and the bones, chills and high fever; suffering oftentimes quite prostrating. The eyes are watery and inflamed and the handkerchief is or ought to be in constant requisition. In most cases there is bronchitis and sore throat.

In some cases the digestive apparatus is badly affected—nausea, vomiting, colic, collapse, sometimes; debility, variably. Too often, alas, grippe leaves in its train chronic ill health, a wobbly heart, a pathetic listlessness in erstwhile strong men; and in many cases where pneumonia does not intervene, latent tuberculosis (consumption) has to be forewarned against. That is why I always advising a long convalescence, at least until the doctor finds the pulse return to normal and the heart be again acting right.

Influenza is not one of those infections which, like smallpox or measles, confers immunity with its first attack; second and third attacks are not uncommon to the individual. And the carriers of the influenza germ are probably numerous; like the typhoid carriers they are not themselves be sufferers, but they are walking germinaries. Be careful therefore of the man who carelessly coughs, sneezes, or sputters while he talks; and do yourself never go about without your handkerchief in constant readiness.

Grippe is preventable, therefore don't contract it. Don't let your physical resistance become impaired, and don't seek crowded places.



WE COULD have looked a long time and not found a man better qualified than Dr. Huber to tell FARM AND FIRE's family the truth about grippe and pneumonia. He has not only won his place in "Who's Who in America" as an authority on this subject, but he is a real human sort of person, too. He doesn't go to the medical dictionary for a fifteen-foot word to tell a man he has a bad cold. He uses plain language.

Dr. Huber divides his time nowadays between service for the Government and as examining physician for the Life Extension Institute. He holds degrees from Hamilton College, the College of Physicians and Surgeons of New York, was professor of pulmonary diseases at Fordham University Medical School, and a lecturer on tuberculosis for the New York State Health Department and the Board of Education. He was captain and surgeon of the 112th Regiment, New York Volunteers, Spanish-American War. He knows what he is talking about. THE EDITOR.

STORAGE BATTERY

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When you start your car, don't try to do it all with the starter button, for that only wastes current. Prime your cylinders and then:—

- ① Set your controls right, with retarded spark, and throttle slightly open.
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Willard Service.

The Mystery at Glen Cove

We can't blame Jimmy for being disturbed. His placid bachelor life has been upset, and if things keep up there's no telling when he will have peace and quiet again

By Howard Vincent O'Brien

WHEN my companion suggested that I return with him to the house, I acquiesced readily enough. It was clear that I could not do otherwise.

"A charming jail, indeed," I observed amiably when we had reached the second floor. "One couldn't ask better quarters for his incarceration."

"It's not a bad hotel—quiet, secluded, all the comforts of home—and a proprietor who doesn't know how to talk!" he added with a significant smile.

Then he swung open a bedroom door.

"This will be your boudoir," he said. "Sorry I can't give you a room to yourself, but I am sure you'll find your room-mate a good companion and he'll post you on all the rules of the house. See you later, old man."

The door closed quietly. I sank into the nearest chair, covering my face with my hands. I was weary in body and soul, discouraged and utterly baffled.

I was aroused by the sound of a cheerily familiar voice coming from the bathroom, which opened off the chamber in which I had been locked.

"Come in here, Jimmy, and watch me shave. I rise late these days—it makes them shorter."

With an exclamation of delight I rushed into the bathroom, and seized my young friend by the hand.

"At last!" I cried. "I've a million questions to ask! What happened to you?"

"Well"—he paused to wipe his razor, leisurely—"you saw them nab me?"

"Yes."

"They had a motor waiting, and we drove out immediately to this leafy dell in the woods. I—I—"

"What about the chloroformed man at the Trevonia?"

"I found a pretext to look into his room before they carried me off. He wasn't there, Jimmy. Nothing but a faint smell of chloroform to show me that I hadn't been dreaming."

"You know nothing more about him—no theory?"

"Not a thing."

"Well, go on. They drove you out here—"

"Yes. My next stop was White Plains. But on the way my poor old brain had a chance to function, and as we passed near the railroad station I had an idea. I tore a page from my notebook, and made a sort of map from there on. Perhaps you can understand now why it was rather sketchy. We came fast, and the machine bounced all over the road. And I had to do my drawing without being seen."

"Why the gap in the line? That gave me a devil of a time!"

"Sorry, but just as we reached those confounded crossroads my traveling companions elected to bestow upon me their undivided attention, and my map work had consequently to be postponed."

"So far it's clear enough—quite amazing, in fact!" I cried. "But how in the world did you get the telegram to me?"

"One of the oldest devices known to detective fiction," he replied with a grin. "Just as we got out of the machine, I saw a small boy passing. I stuck the map into a stamped envelope I happened to have in my pocket, scribbled a hasty wire to you on the back, wrapped them around my knife, and tossed it to the lad. Apparently he had a sense of adventure himself, and—well, here you are."

"And what, if I may ask, is the next step?"

"The next step, Jimmy, old top, is to sit tight and await developments."

"A delightful prospect, to be sure—cooped up in this hole. Have you thought of escape?"

"Extremely risky, I fear," he said briefly. "We're dealing with extraordinarily determined people, you know."

"So I begin to gather."

"A useful fact to establish. And now, Jimmy, your report, if you please."

While he completed his toilet I entered upon a recital of the adventures which had befallen me since our separation. I told them in reverse, beginning at the most recent, and working gradually back to the part I dreaded telling—the identity of the veiled woman I had trailed from the Trevonia.

He listened to the story of my interview with the physician rather indifferently, I thought. But as I proceeded to tell him of the singular disappearance of Carter he straightened his necktie with a vicious jerk, and sat down before me.

"This thing certainly seems to be getting thick!" he exclaimed.

"Thick is no name for it," I agreed.

"Yes, and you, with your usual facility for muddling

the clearest waters, have made it thicker. Why the devil don't you tell a story the right side to?" he demanded.

"What do you mean?" I was dumfounded at this unexpected outburst.

"You haven't even mentioned what success you had trailing the lady we found in the apartment. I suppose she gave you the slip right off the reel?"

"No, she didn't give me the slip."

"You found her? You know something about her?" He leaned forward eagerly.

I nodded, my tongue suddenly failing me.

"Steele, I—"

"Go on, man. Don't try to look like a codfish!"

I placed my hand gently on his knee. "I—I must tell you something which is extraordinarily painful to me. I—"



Like a flash Steele's powerful arms shot from their hiding place

He looked up quickly, startled by the change in my tone. Then his teeth clicked sharply, and the corners of his mouth became drawn.

"I understand," he whispered. "I—I—"

"Leslie," I began gently, "doesn't this demonstrate to you, beyond all doubt, that—"

He held up an imperiously restraining hand.

"I know what you're going to say, Jimmy," he said, "and—and—you needn't say it."

What Has Gone Before

THE whole thing started at a dinner party at the home of Admiral Debrett. A stranger called Carter was there; Agatha Burchard, a young débutante, brought him. During the evening he was called to the telephone by the Japanese butler, Toguchi. A moment later all of the lights went out. Just as they flashed on again a gasping sound was heard in the telephone booth. When the guests rushed in they found Carter unconscious. He had been shot. Marks on his throat showed that someone had attempted to strangle him. During the excitement Marie Brandt, an attractive young widow, disappeared. This whirl of events led Leslie Steele, a bachelor, young and in love with Mrs. Brandt, and his friend Jimmy to take a hand. They pursued fleeing automobiles, were themselves pursued, reached New York, discovered a man in some way connected with the mystery who had been chloroformed, found Marie Brandt, only to lose her again. When we left them Steele was held prisoner by the United States Secret Service. Jimmy had just discovered his whereabouts when he himself was taken into custody.

"Then you still insist that although she—"

"Jimmy," he said seriously, "when I went into thing you knew the real reason for it." His jaws came together with a snap, and I realized that further argument would be worse than futile.

For a long time we sat in painful silence, neither daring to risk an attempt at speech. Then, with a chuckle, he leaped to his feet, and the hard, rigid line in his face relaxed.

"Come, Jimmy!" he cried, quite cheerfully. "No more of this gloom stuff. We've got to go on with the job. I didn't bring you down here to be lectured to by a pious, straight-laced old crab. I had a better pose."

"Then you know why we are here?" I hazarded.

An expression, half triumphant, half perplexed, flitted over his smooth head.

"I've been doing some pretty ear eavesdropping since I've been here, Jimmy," he murmured quietly, "and I—well, you might say I have a hunch."

"Why not share the—er hunch with me?" I inquired, a trifle testily.

"Because, old boy," he replied mysteriously, "it would merely confirm my previous suspicions that I was hopelessly insane. Furthermore, it would take your mind off more pressing matters. Now, you please, listen carefully to what I got to say."

"I am under your orders, sir," I said stiffly.

"Glad to hear it. Get them straightened out—they're important. Now listen. When you go down-stairs to dinner to-night, your usual cheerful self. After dinner they'll take us into the living-room for a phonograph concert. Cigars will be supplied. Take one, and as you start to off the end make the discovery—loud enough to be heard—that you have your knife up-stairs. Excuse your casualness, and go up to get it."

"Suppose someone offers to lend me a cutter?"

"Don't hear him. And don't interfere with me."

"No, sir."

"Very good. At the left of the stairs, as you go up, you'll find a door. Open it, and go on up. You will find yourself in the attic, and over near the south window there'll be a ladder leading to a trapdoor which opens on the roof. Keep mounted. Then crawl out along the deck to the chimney. You'll find a box there, which I have provided. Get up on it. I forgot to say that you're to take along an armful of newspapers which you'll find near the ladder in the attic. Stuff a box of them—very lightly, so they won't pack—into the chimney. Then—set the afire. When the blaze is going well, the rest in on top, packing them this time so that the draft will be stopped off. Then

come back home, down-stairs, as fast as you can without falling off the roof."

"But won't you even give me a hint of the reason for this amazing maneuver?" I demanded.

"You'll see it in good season," he replied with a twinkling in his eyes. "It—it's such fun to mystify Jimmy."

At dinner the subtlest interrogation failed to elicit the slightest crumb of information. The gentlemen in white hands we found ourselves were very far, it soon became clear, from being commonplace individuals, and but the equivocal relationship existing between us the evening might have been a wholly enjoyable one.

We adjourned to the living-room presently, and Steele had prophesied, cigars were brought out. I realized then that my cue in the mysterious drama my friend had been given. I fumbled elaborately for my mythical knife, and went up-stairs to get it without my surprise, eliciting any comment whatsoever.

The remainder of my instructions were likewise carried out without hitch.

As I hurried down-stairs again, my task, in all its tails, accomplished as per instructions, I knew that Steele was busy with his rôle in the little drama. There was confusion of voices, his clear above the others, and scurry of heavy feet. But the cause of the excitement whatever it was, appeared to be gone before I could reach its scene.

"What has happened?" I cried, exhibiting an agitation which was in nowise feigned.

"Oh, nothing," replied one of the Secret Service men easily. "We thought we smelled fire."

There were traces of smoke in the air, but my fire either gone out or the fuel had been entirely consumed in the chimney, for no further [CONTINUED ON PAGE

What the Ships Mean to You

[CONTINUED FROM PAGE 5]

lack of ships has, during the war, hampered our trade relations with these neighboring nations of the American Continent than we like to contemplate; adequate American tonnage means an opportunity for full development of the great possibilities between the peoples of the hemisphere opened up in consequence of war and of that friendship and understanding which commercial intercourse so much to promote."

Many years our representative live-stock breeders have tried with consistent success to open to American-bred the tremendous markets in South America. This export trade has long been one of the cornerstones of British agriculture, laid by a farseeing policy of shipping and diplomatic and trade negotiations. Today our live-stock breeders' associations are fully awake to the opportunity which is our opportunity in South America. A representative breeder said to me recently: "The absence of shipping facilities in the United States and South America, plus the absence, until recently, of shipping facilities for Americans in South America, has heretofore been a barrier which has given all the pure-bred export stock on cattle shipped to South American countries, particularly Argentina and Uruguay, to Great Britain. We do not expect that we will be able to do a great deal of export business away from Great Britain in South Africa, India, and New Zealand, where a great deal of our kind of cattle have been bred, but we see no reason why South America, particularly Argentina, Brazil, Paraguay, and some others, should not, if diplomatically handled, develop into great export fields for us."

Not only do we think that the pure-bred export business of cattle to South American countries should help the United States in the future, but we believe Mexico to be a tremendously big field after the war ends. While there have been but few exports of our cattle to South America, the lack of shipping and the lack of banking facilities, plus diplomatic handling, have been the cause. There is no reason why this business could not be immediately developed to us for these countries when the war ends—a business which should increase year to year until the great areas of South America are brought up to capacity production."

Live breeders of live stock have not lost sight of the fact that vast European markets have been wiped out as a result of this war and that after the declaration of peace, many years to come, America must take part in the task of rebuilding these herds. We have our manufacturers of farm machinery failed to note that with adequate shipping facilities the markets of Europe, South America, and even Africa, will be open to their products. Europe will need to import certain fruits. To this end we shall see the refrigerator ships which now are launched to carry perishable products overseas.

Though our exports may occasionally be small," says Gustavus Myers, the noted economist and research writer, "still, on the whole, there is every probability of increasing."

Large areas of Europe are depopulated and devastated. Much of the rich wheat-producing sections, including all of the winter producing areas of Russia, are in the hands of the enemy. Conditions in Russia are chaotic. The western European Allies landed in 1917 about two hundred and fifty-two million bushels less than the pre-war average. There was a great loss also in the wheat production of other European countries. Argentina, Australia, and India are producing good crops, but are not shipping to move them properly. Thousands of miles nearer the scene, the United States is the one country looked to for succor.

While war conditions prevail, there is a enough demand from our allies in Europe for material of all kinds. We have plenty of coal, steel, oil, cotton, lumber, locomotives, and a great many other

[CONTINUED ON PAGE 13]

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and levers for setting slant of teeth. All work with International tractors or horses. These tools prepare the finest kind of seed beds.

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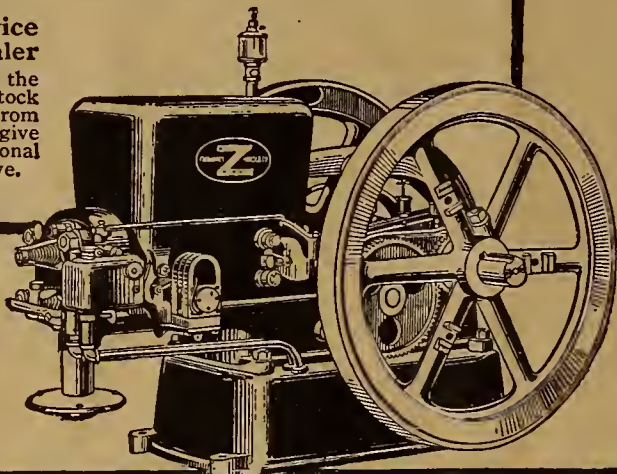
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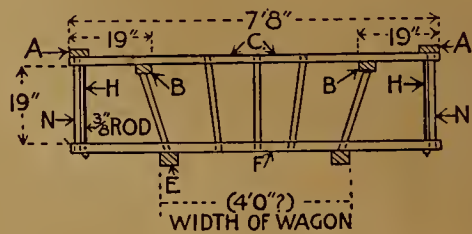
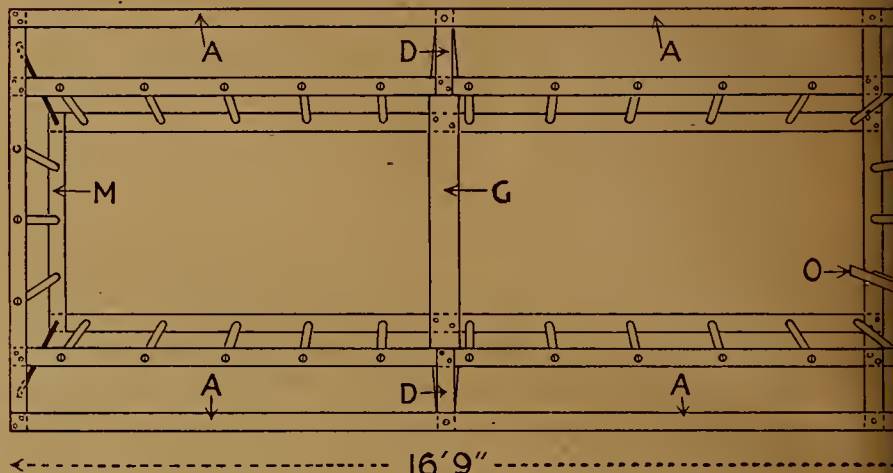
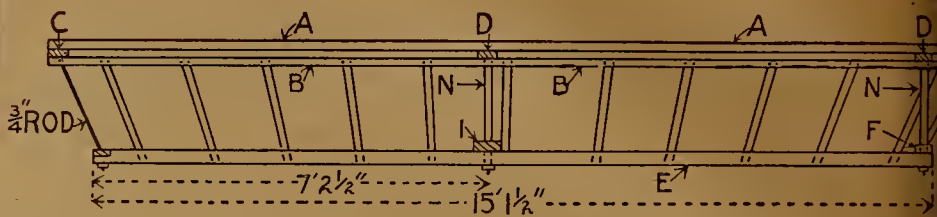
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The New Hayrack

By Charles A. King



THE two-horse hayrack shown in the illustration was made for a wagon bed four feet wide and sixteen feet long, but the strength of the sills E will permit the rack to be used upon a wagon fourteen feet long. Most wagons, however, require a longer reach than that furnished when used with a hayrack.

In making the rack the top frame of pieces A B C D and the bottom frame E F G M should be bolted together; the one-inch holes in A D G F, which are to receive the upright bars N, should be bored and the bars fitted to their places. A piece should be lightly nailed to the front rails C and M to hold them in their correct relation to each other while boring the holes for the bars.

The boring of these holes is the most difficult part of the work of making a rack of this sort, as they must be bored accurately or there will be trouble in putting the rack together, and the uneven strain upon the bars may break one or more of them. By following the method outlined here there need be no trouble in doing this.

Mark the centers of the holes upon the top of the bottom rails E F M and the top rails B C. The correct angles of the holes in each of the rails may be found by fastening a straight-edge to the edges of the rails as at O, so its edge will be parallel with an imaginary line drawn through the centers of the holes, and extending above the top rail to guide the bit. It is plain that by carrying the bit parallel with this straight edge the corresponding holes in the top and bottom rails will be in line. The holes in both the top and bottom rails may be bored with an ordinary one-inch bit and brace, boring the top holes first and holding the bit and brace in line while boring the bottom holes. A bit with a long shank or an extension long enough to reach through the holes to the bottom of the rack will be an advantage in boring the holes in the bottom rails.

The three-fourths-inch iron rod K should be fitted after the woodwork of the rack has been completed. The rod H may be put in place when the rack is set up permanently.

The wood of which this rack was made was oak, but ash, elm, maple, or any strong wood will do quite as well.

The following list includes the material required for building the rack:

TOP FRAME

2 pcs. (A) 1½ in. x 3½ in. x 16 ft. 9 in.
2 pcs. (B) 1½ in. x 3½ in. x 16 ft. 9 in.
2 pcs. (C) 1½ in. x 3½ in. x 7 ft. 8 in.
4 pcs. (D) 1½ in. x 3½ in. x 19 in.

BOTTOM FRAME

2 pcs. (E) 2¾ in. x 3½ in. x 15 ft. 1½ in.
1 pc. (F) 2½ in. x 3¾ in. x 7 ft. 8 in.
1 pc. (G) 2 in. x 6 in. x 7 ft. 8 in.
1 pc. (M) 2¾ in. x 3½ in. x 4 ft.

32 bars 1½ x 1½ in., length as follows:
3 front ends 29 in. 3 back ends 28 in.
6 sides 28 in. 4 uprights (N) 16 sides 27 in.

28 bolts ¾ x 3½ in. 4 bolts ¾ x 6 in.
4 bolts ¾ x 5½ in. 4 rods (H) ¾ in.
2 rods (K) ¾ in. by about 3 ft. long, for work.

The Daily Reminder

By F. T. MacFeely

CLAYTON WEAVER, an Indiana farmer, has a plan for reminding things that need attention. He keeps a small pad of paper and a pencil in his stable, and while he is in the stables or in the field he makes a note of everything that comes to his mind in the way of repairs or new tools that he may require.

Time after time Mr. Weaver had trouble in remembering about making repairs to fences or sheds or needed tools when he went to town. Now he has no more trouble. He makes notes wherever he might be at the time they come to his attention, and when he turns to the house he puts the notes in a book. He can find them when wanted. He saved himself many a trip to town because he always knew just what he wanted after he got there.

Any old scrap of paper will serve the same purpose just as well as the pad. It is cheaper. This idea has saved Clayton Weaver many dollars, and he recommends its use to others.

What the Ships Mean to You

CONTINUED FROM PAGE 11

After the war period, when the rehabilitating Europe is put through, and upon this country for raw and stored material of all kinds will be us. We shall also have to replenish depleted herds of Europe from our own. Ours, in fact, will be the task of most of the world."

There is no conjecture about the future of our merchant marine. The usefulness rests entirely with farmers, manufacturers, and men generally, to whom the Shipping Board and the Emergency Fleet Commission is ready to turn over the ships held trade immediately these have ended the emergency task before them. Merchant marine is an all-American and we must keep it an all-American institution. To this end the Government of America has been invited to increase its possibilities as a maker of ships. The manning of these ships will be left to trained merchant mariners from our countries.

The war began the tonnage has been divided between the Shipping Board and the Navy, virtually on a fifty-fifty basis. The ships assigned to the Navy Department being used in its overseas trans-shipment.

The division of tonnage was based on an agreement between the Shipping Board and the Navy Department, dating from 1914.

making commercial voyages in the war zone and to all other parts of the world are manned by civilian

Shipping Board, since the war began, built up a training system for merchant officers and crews that will now be at its fullest capacity for producing men needed in the merchant marine.

Under the board's recruitment system, now has ten training ships and eight ships actually in commission, and others authorized, two of the latter in the Gulf and the Great Lakes respec-

the board's Atlantic training squadron, at Boston, has three cruising training ships which make regular visits to Philadelphia, New York, Norfolk, and other ports. A receiving ship is maintained at New York, and another at Norfolk.

The Pacific squadron are four training ships, two based at San Francisco and Seattle. The Gulf training ship will be based at New Orleans, and the Great Lakes ship at Cleveland.

The output of these training vessels will be ten thousand men a month. In the twelve months approximately thirty thousand will be accepted for training. Ten thousand have already been trained. Officers and engineers for our merchant marine are being given free technical training in navigation schools opened at Har- vard, Massachusetts "Tech," and other schools along the Atlantic, Gulf, and Pacific coasts and on the Great Lakes. As these men graduate they are sent to sea.

Age scales have been worked out for various grades of service aboard our merchant ships, merchant seamen's uniforms adopted, chantey singing revived, the entire scheme of recruiting and training this all-American personnel put on a basis calculated to appeal to the imagination of the young American, and later justify this through the personal benefits accrued through both training and service at sea.

Young men between the ages of eighteen and twenty, inclusive, are accepted as sailors, stewards if they pass through the course of training. The age limit for officers is between nineteen and fifty-five, while only men who have put in years of active duty are eligible to this grade of service. Firemen are recruited from between twenty-one and thirty-one; those who have fired six months of fifteen pounds pressure will receive special training as oilers and tenders.

One of the most cheering developments in the launching of our new merchant marine has been the rallying to it by the men who have been sailing the seas on flying every flag but our own, men who longed for the day when once more they could walk the decks of American merchantmen made in America and manned by Americans.

The American merchant marine has come back, this time to stay.

"BEATS ANYTHING FOR CULTIVATING I EVER SAW"



It's Easy and Practical

"I was agreeably surprised at the ease with which we could cultivate corn with the Moline-Universal," says Miles Kinnick of Adel, Iowa. This is the usual expression from every one who has used the Moline-Universal for cultivating.

The Moline-Universal Tractor straddles the corn row and has as much clearance as the ordinary cultivator, so corn can be cultivated in all stages of growth. The tractor is attached to the cultivator and forms one complete unit—the tractor the front wheels and the cultivator the rear wheels. The operator sits on the cultivator and has a clear, unobstructed view of the row ahead. This is of the utmost importance for good work.

In cultivating, you follow the same rows as planted by a two-row planter. As hills in these rows are exactly the same distance apart, only one row need be watched.

The Tractor is easily held to its position, and by keeping the right drive wheel, which is in line with the operator's eyes, a certain distance from the outside corn row, the only other attention the outfit needs is an occasional shifting of the gangs by the operator's feet.

The cultivator is extra heavy and holds to its work when the cultivator gangs are shifted. The electrical governor control within easy reach of the operator enables the tractor to be slowed down to as low as one-half mile per hour.

Injures Less Corn Than Horses

By using care in turning at the ends of the rows less corn will be injured than with horses.

"I have often, without hesitation, angled into position and proceeded toward the other end of the field without hitting a hill," says W. A. Marker of Van Wert, Ohio, who owns a Moline-Universal cultivating outfit and farmed 80 acres with it, living in town 8 miles away, devoting part of his time to other work. He goes on to say: "Practice soon will make you expert if you will but consistently study the game."

"This cultivator, I feel, more than paid for itself the first season through increased yield due to timely cultivation."

"There is nothing that will beat the Moline-Universal Tractor. It will work wherever hitched. For plowing and discing it is fine; beats anything I ever saw for cultivating, just the thing for the binder and one man can handle all." Thus A. C. Paul of Middletown, Ohio, sums up in a few terse words the great advantages of his Moline-Universal Tractor.

This is not the opinion of just one exceptional individual, but is a typical expression of Moline-Universal owners.

Before designing the Moline-Universal Tractor, as manufacturers of farm implements, we knew a tractor would be of little value to the majority of farmers of the United States unless it would cultivate row crops. If a farmer is forced to keep his full number of horses for cultivating there is small economy in owning a tractor. Therefore the Moline-Universal was designed to cultivate as well as do all other work. We reproduce a few expressions from Moline-Universal owners to show just how well it has succeeded in cultivating and what bearing the cultivating feature has had on their farming operations as a whole.

Harley A. Mishler of South Whitley, Ind., farms 185 acres. The Moline-Universal enabled him to dispose of four horses. He says: "For cultivating a Moline-Universal Tractor is better than horses a dozen times. It is steady and stands the hot weather. It does not stop and switch flies but goes fast or slow just to please you."

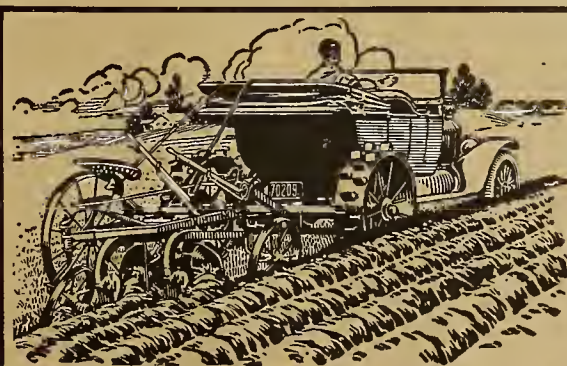
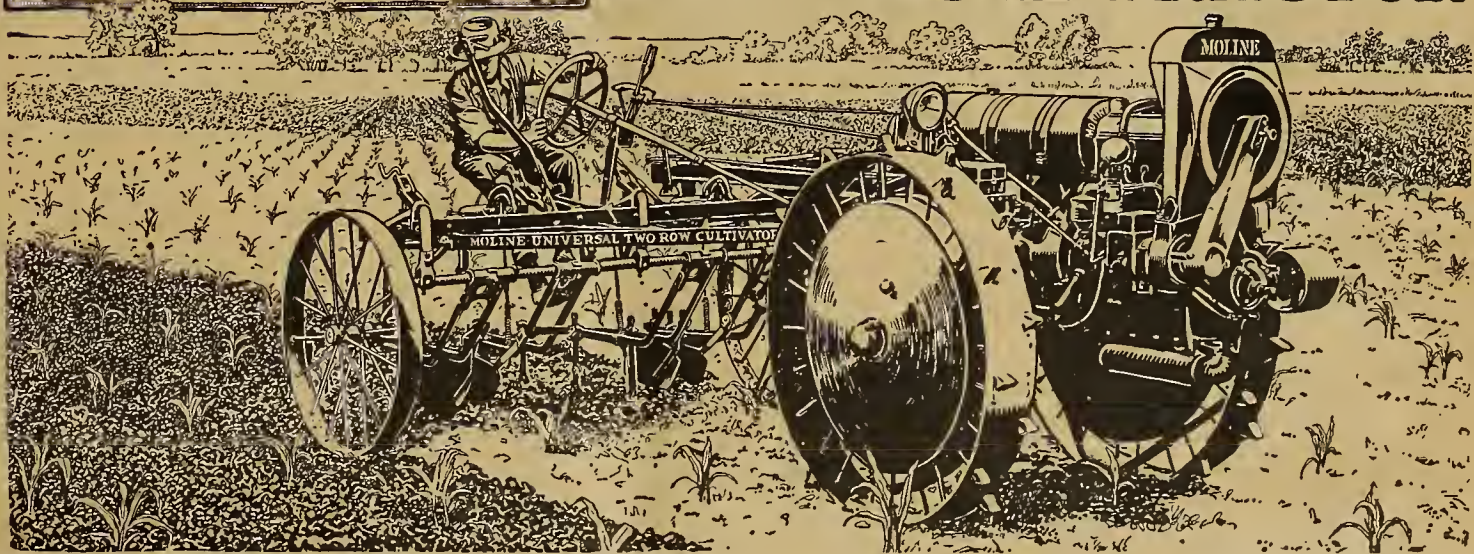
C. R. Barr of Wyaconda, Mo., last summer had 130 acres in corn and 75 acres in oats and wheat. Since using the Moline-Universal he keeps only one team of horses. He used the Moline-Universal for cultivating and says: "I don't think we could farm again without the Moline."

Ed. Finnegan of Bradford, Ill., says: "I cultivated and tended, from the time corn came up until it was laid by, 80 acres of corn. In going over the corn for the first time you can throttle the motor down slow and not cover up any hills. After I bought my Moline-Universal I rented 35 acres more ground and the crops from this extra land paid for my tractor."

Another remarkable instance is furnished by E. E. Fletcher of Krum, Texas, who farms 500 acres—100 in cotton—and all the work is done by two Moline-Universals—not a single horse is used.

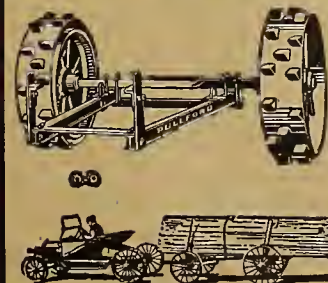
Moline Plow Co., Moline, Illinois

MOLINE UNIVERSAL TRACTOR



Plow and Pull
With Your **FORD** Or Most Other Cars
Pullford \$155 F. O. B. Quincy, Ill.

MAKES a practical tractor out of a Ford or most any other car. Easily attached to or removed from the car in thirty minutes. No holes to drill, no springs to remove. **Practical, Durable, Reliable.**



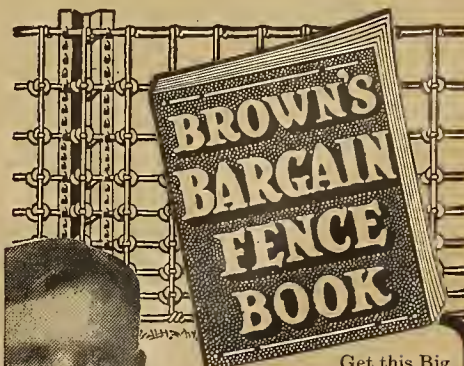
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Hundreds WORKING NOW for Satisfied and Enthusiastic Owners

Pulls plows, harrows, drills, mowers, binders, hay loaders, road graders, wagons, trucks, etc. Steel wheels with roller bearings and tires 10 inches wide, two pairs of hardened Vanadium steel pinions, one for plowing and one for hauling speed. A tractor with the reliability and durability of the Ford car. Prompt shipment. Write for catalog.

It was the Pullford attached to Ford cars pulling two 12-inch plows running on Kerosene, equipped with new fan device, that made a most successful demonstration at Fremont, Nebraska.

PULLFORD COMPANY, Box 13C
Telephone No. 84 Walton Heights, QUINCY, ILLINOIS



Get this Big Money-Saving Book and sample of BROWN'S ACID TEST HEAVY GALVANIZED FENCE, both free, postpaid. See the quality and compare my LOW FACTORY FREIGHT PREPAID PRICES. Our prices beat all competition—our quality we let you prove before you buy.

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Don't buy a rod of fence this year until you get my New Bargain Fence Book. Shows 150 styles. Also Gates, Lawn Fence, Barb Wire—all at starting low prices. A postal brings sample to test and book free, postpaid.

THE BROWN FENCE & WIRE CO. [9]
Department 421 CLEVELAND, OHIO

Dependable, Economical Power Under All Conditions **WATERLOO BOY** ORIGINAL KEROSENE TRACTOR

Whether your soil is hardpan, black-wax, timothy sod, gumbo or just loam, the Waterloo Boy Kerosene Burning Tractor has the necessary power to farm it. Our thousands of satisfied users all over the United States have given this tractor rigid try outs in every possible soil condition, and the Waterloo Boy has always pulled through with a record.

Perfect Lubrication Necessary to Efficient Work and Long Life

The teeth of friction get busy quicker on a tractor than on other machines, because of the trying circumstances under which it must work. No matter how well your machine is built, it cannot do good work unless the lubricating system is right.

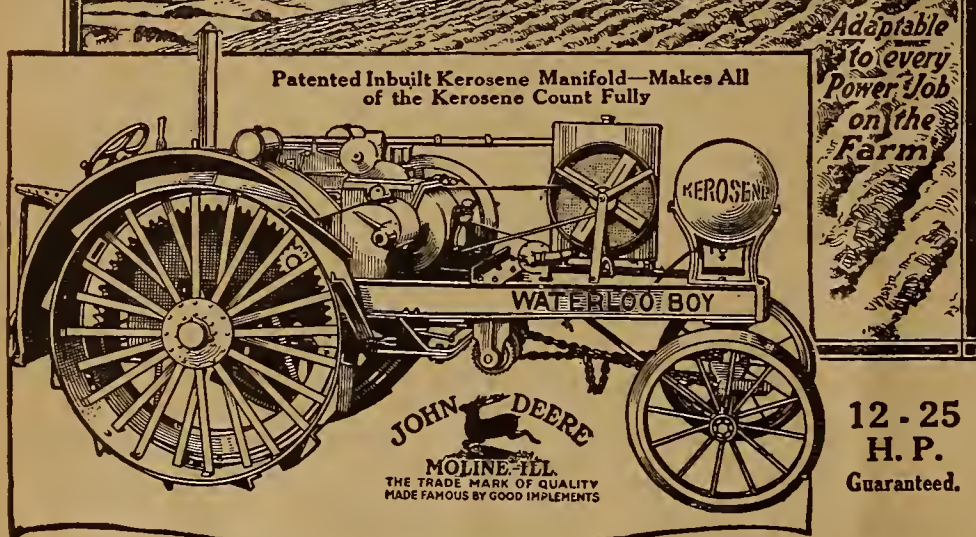
The Waterloo Boy is equipped with the well known circulating splash and pump system of lubrication, which is employed on high class automobiles generally. This constantly maintains a substantial oil flow between all friction points. With dust-proof gears and bearings, it prevents wear, increases power, keeps down repair expense, insures smooth, steady work.

High quality material and workmanship throughout guaranteed.

Write us for illustrated catalog showing many photographic views with letters from users, also details of construction.

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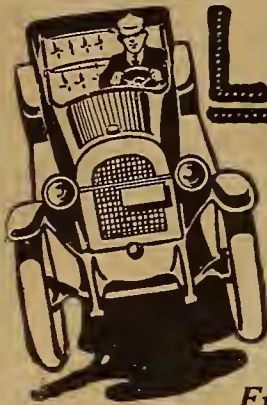


Patented Inbuilt Kerosene Manifold—Makes All of the Kerosene Count Fully

Adaptable to every Power Job on the Farm

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MADE FAMOUS BY GOOD IMPLEMENTS

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H.P.
Guaranteed.



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Seeders, Cultivators, Listers,
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**ROCK ISLAND
No. 38 One-Man
TRACTOR DISC**

Close-up levers permit one man to operate tractor and disc. Extra strong and flexible. No clogging.



You Should Borrow Money

The real secret of how to make a staunch friend of banker is to do business with him

By J. R. Sprague

HAVE you borrowed any money from your bank during the last year? If you are a good business man and a good farmer, and have not thus borrowed, you have not done your full duty to yourself.

Most of the instances I use here to make my point are about business men in smaller towns in my section of the country, but the same principles, the same ideas, apply to farmers and to business men everywhere just as well as they apply here.

Of course, if you have tried to borrow, and the cashier would not let you, there is nothing more to be said. But presuming that you are reasonably solvent and still several jumps ahead of the sheriff, you ought to borrow money from your bank whether you need it or not.

Your credit at the bank is just so much extra capital for you. You may be on easy street now, discounting all your bills, and perfectly calm even though you see the bank collector coming in your front door, but one of these days you may need some quick cash money. There may be a long drought in your section which will seriously affect your business, or a strike in the railroad shops, or a slump in the price of cotton. Or it may be that you will want money for the more pleasing purpose of buying merchandise offered at a bargain.

At any rate, you are liable to want quick money at any time, and your bank is the place where you will have to go to get it.

Your bank credit is not in good working order unless you exercise it once in a while. Possibly you think you can get money any time you want it, simply because you have never borrowed. But it works quite the other way. When you ask for a loan the first time the cashier will probably tell you to come back in a day or so, because the rules compel him to take all such matters up with the board of directors. What he really wants is time to make inquiries about you and learn, if possible, whether anything has happened that you should depart from your usual custom and begin borrowing.

When you go into your bank you sometimes see a man step up to the cashier's window, have a word or two of conversation, walk over to the customer's desk, where he makes out a note, carry it back to the cashier, and get the amount set down in his book as a regular deposit. It looks almost ridiculously easy. But the man who puts it over that way is not doing it for the first time. He is a regular customer.

If you are solvent and honest you do not ask a favor when you walk up to the cashier's window and say that you would like to borrow money. Rather, you are a welcome customer, just as if you walked into a shoe store and said that you would like to buy a pair of low shoes, not too pointed at the toes. For the bank does not make anything by keeping people's money on deposit. All the bank's profits come from lending money.

A furniture dealer in a southern city made a practice of borrowing money from his bank once a year as a sort of insurance against the time of need. During the fall when buying his holiday goods he would borrow enough to pay spot cash for his purchases, and pay the bank after the holidays. He did not need to do this, because the manufacturers would have sold him the goods payable January 1st, but he did it to keep his credit in good working order.

Last fall one of this furniture dealer's competitors, located only a few doors from his store, went bankrupt. A firm of auctioneers, hearing of the failure, came to town prepared to buy up the stock and put

on a bankrupt sale, bringing in a quantity of shoddy goods to work off on the liquidation of the defunct store.

Such a sale would have been disastrous to the furniture man. He went to his bank and asked to see the president. He was told that the gentleman had left the morning on a business trip to New York. He then explained the situation to the cashier, but without much hope that anything could be done in the absence of the president.

"How much have you got to ask the cashier?"

"Fifteen thousand dollars," replied the merchant, "and those auctioneers are the lawyer right now, waving a New York draft in front of his face."

"Fix up three notes for five thousand dollars each, payable in thirty, sixty and ninety days," said the cashier, "and you are doing that I will make out a check for the money."

The bankrupt stock was bought, the furniture man a good profit in it to the public, besides saving him

incidental to scrupulous sale almost a nose.

When he last note he the cashier, accommodated said he had dered how he the money s

"Because were a regular tomer," replied the cashier. "If never borrowed fore, even the dent would let you have money without sulting the directors. Borrowings, never very late always been satisfactory, was merely, a affair and up discretion."

Sometimes it does a merchant more ways than one to borrow money from his bank. A jeweler in an Oklahoma town had for some years done business with a leading banker, always keeping a factory balance on deposit, and generally being a good customer.

But he could never get the banker's family to do any business with him. A wrist watch was to be purchased for the daughters, or a silver tea set for the wife, the purchase had to be made in Philadelphia or Little Rock.

When on his annual visit to his home in St. Louis, the Oklahoma jeweler complained, and was advised to become a regular customer at the bank.

The jeweler returned home and he was told. Rather to his surprise he received the money without any delay. And from that time on the banker was a little more cordial to him. It was a line at the receiving window he made his deposit, the banker came out of his private office and took the jeweler's money himself. If the jeweler wanted to inquire about anyone's money the bank was always more than willing to assist him.

One day the banker walked into the jeweler's store. It was his first visit though the jeweler had been in business more than five years.

"My wedding anniversary comes next week," said the magnate, "I want to buy my wife a little present. Of course, my family like to get such things in the big cities, but I always tell them we ought to patronize our home merchant. Spend your money where you earn it, my motto."

The jeweler made exactly a hundred dollars' profit on the diamond ring the banker bought that day. And interest on the thousand dollars which he borrowed from the bank on his sixteenth note was only ten dollars.

Zero Weather and the Tractor

By Russell Adams

AFTER you have thawed out the pump with the teakettle, and broken the ice on the tank so that the stock can drink, it's almost the last straw to have to spend half the morning trying to get the tractor started in order to grind corn for the feeders.

Heating the manifold with a blow torch will aid in starting, but there is much danger of fire in using this method. The intake can be heated by applying a hot iron, but it takes considerable time. Hot water is helpful too, only it takes time to heat the water. I have tried all of those methods, but have placed them in the discard for a better one.

Take a small container—I have used a shaving stick box with good results—and drill a few tiny holes in one end, leaving the other end entirely open. A small handful of cotton waste is now dipped into water and the surplus water squeezed out. Into this bunch of wet waste three or four grains of calcium carbide the size of a pea are placed, and the wet waste wrapped loosely around them. The bunch of waste is placed in the open end of the container, and we are ready. Prime the engine lightly with gasoline, place the drilled end of the container on air intake of carburetor, turn the engine over, and away she goes. Carbide gas is highly explosive—a very weak spark will set it off—yet when used in this way there is very little, if any, danger, and it is quick and certain.

A Handy Staple Puller

By L. B. Callahan

THERE are many more or less efficient staple pullers on the market, but the cheapest as well as one of the best which I have ever found is a plain steel harrow tooth. I always select as heavy a one as I can find, and then grind it down at the point until it is nearly sharp.

To operate this staple puller the point of the tooth is placed under the staple and wire and then the tooth driven with a heavy hammer. The staple is thus easily wedged out of the post with practically no damage to itself or the wire.

The Catalpa Put to Test

By W. S. Blake

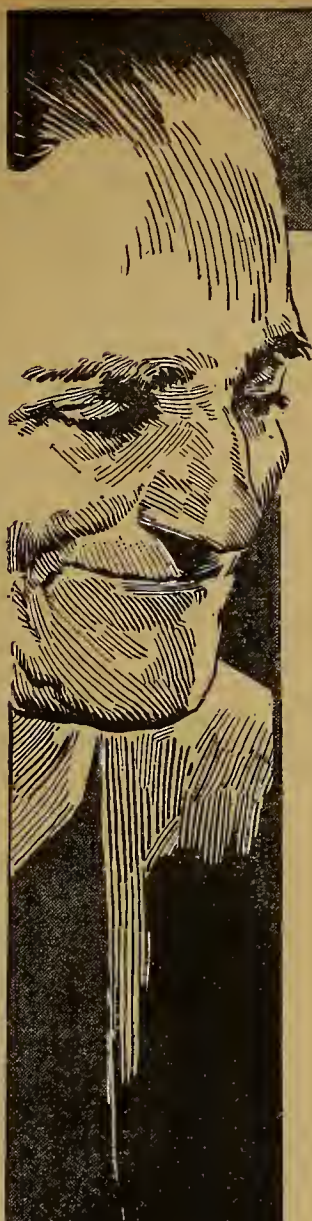
FOR a generation past, as our local supplies of timber have rapidly diminished for fence posts, various implement repairs, and other purposes, the quick-growing, hardy catalpa has come into wide-spread public notice as a source of farm-timber supply. Its adaptability to this purpose has been both endorsed and questioned by farmers who have put this wood to the test. But the difference of opinion concerning catalpa for farm-timber purposes I believe is mainly due to right and wrong methods of seasoning and handling when put to actual use.

My conclusion is that in cases where catalpa has failed in durability and strength when used for fence posts and farm-implement repair work, the seasoning of the timber was at fault. I have found, through a period of nearly a score of years, that catalpa of any age, cut when the trees are in a healthy condition and immediately carefully seasoned by ricking the fence posts or lumber so that a free circulation of air is assured until the timber is fully seasoned, the lumber resulting is light, strong, and durable.

Fence posts thus handled are able to resist any reasonable strain, and will hold the staples securely. Similarly, when used for implement tongues, doubletrees, single-trees, neckyokes, sled runners, and general farm repair work, catalpa has satisfactorily taken the place of oak, ash, chestnut, and other timber formerly most used for fencing and repair purposes.

My personal observation of several catalpa plantations indicated that this timber should be handled on a sixteen or eighteen year rotation, so that the trees may furnish cuts for three lengths of posts sufficiently long for usual fencing purposes.

So, too, experience has now demonstrated that late winter and early spring are the best and safest times to cut catalpa trees for timber, and if cut low, with a slanting, smooth stump, the succeeding growth of sprouts will be free from disease, and more uniform trees will be the result.



“DELCO-LIGHT

is a Time and Labor Saver

“We have had our Delco-Light plant for more than two years now and the work that it is doing out here saves several hours of time each week.

“The time and labor saved multiplies man-power on the farm.

“So you see Delco-Light is a good investment.

“By just pressing a button we can start an electric motor that runs the washing machine for my wife, milks the cows, operates the cream separator or tumbles the churn.

“Delco-Light gives us running water throughout the house and barns. It furnishes good, safe, clean electric light everywhere. We can do our chore work after dark as well as in broad daylight. And it does not take as long as when we had to lug lanterns about.

“The old smelly lamps and lanterns have been stored away. They are nothing but relics now, like the cradle my great-grandfather used, to harvest grain.

“Electric light eliminates fire risk. I do not fear fire any more.

“And the beauty of it is that we have all of these things at low cost. The plant runs on KEROSENE. The same kerosene that we burned in the lamps and lanterns, furnishes both electric power and light.

“Delco-Light pays for itself. There is no question about it.

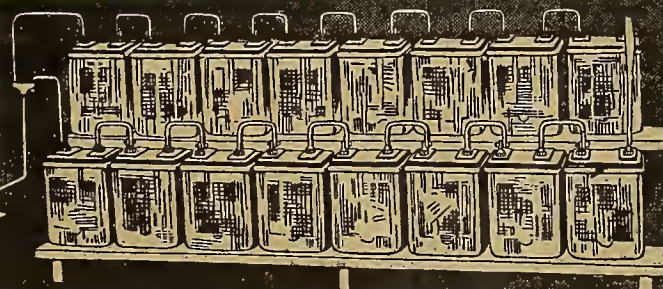
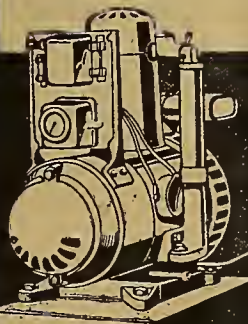
“Before I had Delco-Light I did not know much about city conveniences. I believe that if I had to give up Delco-Light now I would move to town. My family would insist on it. Delco-Light helps every one of us in our work and keeps the children contented.”

The above sums up statements made in over 5000 testimonial letters just received from users—More than 60,000 such users endorse Delco-Light.

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DAYTON, OHIO

A complete Electric Light and Power Plant for Farms and Suburban Homes—Self-Cranking—Air Cooled—Ball Bearings—No Belts—Thick Plate Long Lived Battery—RUNS ON KEROSENE



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Use Your Ford!

to GRIND YOUR FEED FILL YOUR SILO SAW YOUR WOOD SHELL YOUR CORN PUMP YOUR WATER ELEVATE YOUR GRAIN



Ward Work-a-Ford

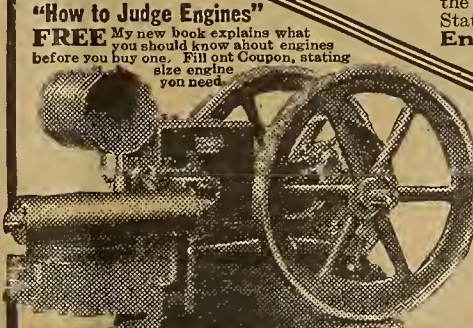
Gives you a 12 h. p. engine for less than the cost of a 2 h. p. Ford builds the best engine in the world—it will outlast the car—and you might as well save your money and use it to do all your farm work. **No wear on tires or transmission.** Hooks up in 3 minutes. No permanent attachment to car. Cannot injure car or engine. **Friction Clutch Pulley** on end of shaft. Ward Governor, run by fan belt, gives perfect control. Money back if not satisfied. Ask for circular and special price. **THE WARD CO.,** 2035 N St., Lincoln, Neb.



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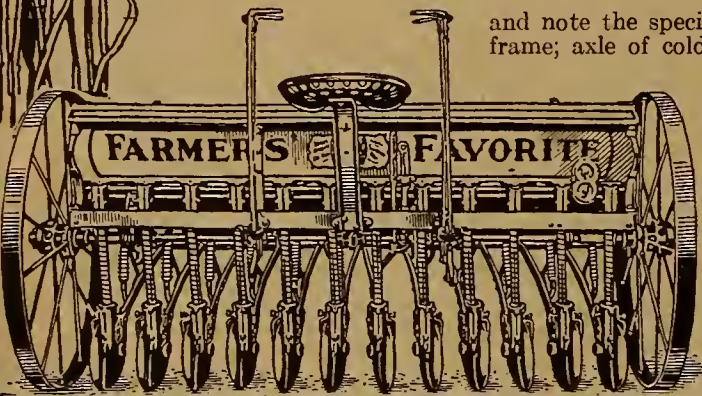
Farmers' Favorite Tractor Drills
Adjustable Hitch for use with any tractor. Power lift enables operator to raise or lower discs while in motion without leaving seat of tractor by slightly pulling small rope. This Tractor Drill is a great time and labor saver to the farmer.

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and note the special features of this Grain Drill. Strongest angle steel frame; axle of cold rolled steel shafting; drag-bars of high-carbon steel; double run force feeds; steel ribbon grain tubes. Farmers' Favorite Grain Drills have been on the market for more than 50 years and are used in every grain growing country in the world.

Call on your dealer and have him show and explain these and other special features and the merits of the Farmers' Favorite Grain Drill, which is sold under the strongest possible warranty.

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and all other low grade fuel—You'll save many dollars every month.

ONE gallon of cheap kerosene will give greater efficiency with our Burn Oil Device than a gallon of gasoline. You go more than just as far for less than half as much. Cuts fuel cost for approximately 3c per mile.

Thousands Giving Good Service In Operation Today

Following letters are only sample of letters received:



The "Burn Oil" Way
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No new carburetor required. Easy to attach. Price is low. Soon pays for itself. No trouble with spark plugs. Nothing to get out of order. Nothing mechanical added to your motor. Hence what our device does on one car, it will do on

another. This is the greatest economy device for Ford cars ever designed. It pays its purchaser dividends every time he buys fuel. We want good, live agents everywhere. Get our proposition now.

Burn Oil Device Co. Center, N. D.,
Peoria, Ill. Sept. 16, '17.

Gentlemen—Enclosed find check in full for ten devices. I can say for your Burn Oil Device that it does more than you claim. I make 25 miles per gallon of cheap kerosene. Yours truly, N. O. Nelson. P. S. I am waiting for my contract for Oliver and Marten Counties, have sold 20 devices without asking anyone to buy from me.

Burn Oil Device Co. Du Bois, Pa.
Peoria, Ill. Aug. 24, '17.

Dear Sirs:—I tried the Burn Oil Device out, and it is working fine. I have run about 300 miles this week and did it on one third the cost of gasoline. I have advertised the device and Ford owners are getting anxious for them. I would like a contract for Jefferson and Clearfield counties. Yours truly, L. W. SMILEY.

BURN OIL DEVICE CO., Inc., Dept. F. F., PEORIA, ILLINOIS

SAVE COAL

Saw wood and serve the Nation! Saw it by machine and save labor. Bigger money in fuel wood this season than ever. An

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will give you longest service and safety always. Solid, rigid frame won't get rickety or out of line. Boxes non-heating—dust-proof—self-adjusting. Free booklet shows 10 styles and sizes—tilting and sliding table types, drag and circular log saws, complete mounted saw rigs, etc. Write Appleton Mfg. Co., 609 Fargo St., Batavia, Ill.

Branches:
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Largest Makers of Quality Saw Frames.

A Dwarf in Size A Giant in Power

Only 40 to 60 lbs. per H. P.

Cushman Engines weigh only 40 to 60 pounds per horsepower, yet have plenty of surplus power. They weigh only about one-fourth as much as ordinary farm engines, but they are balanced so carefully and governed so accurately that they run much more steadily and quietly. They are also the most durable farm engines in the world, on account of their improved design and better material and construction.



Easy to Move from Job to Job

CUSHMAN Light Weight Farm Motors



4 H. P. on Binder
This is the famous All-Purpose Cushman that has been used on so many binders. Just as successful for all stationary jobs.

4 H. P. weighs only 190 lbs., being only 48 lbs. per horsepower. Besides doing all ordinary jobs, it may be attached to any grain binder, saving a team, and in a wet harvest saving the crop. Also it may be used on corn binders and potato diggers.
8 H. P. weighs only 320 lbs., being only 40 lbs. per h. p. For all medium jobs. Also may be attached to hay presses, corn pickers, saw rigs, etc.
15 H. P. weighs only 780 lbs., being only 52 lbs. per horsepower. For heavier farm jobs, such as 6-hole corn shellers, ensilage cutters, large feed grinders, small threshers, etc.
20 H. P. weighs only 1200 lbs., being only 60 lbs. per h. p. For heavier duty jobs, such as shredders, shellers, grain separators, heavy sawing, etc.

Cushman Engines do not wear unevenly and lose compression. Every running part protected from dust and properly lubricated. Equipped with Throttling Governor, Carburetor, Friction Clutch Pulley and Water Circulating Pump. Ask for Book on Light-Weight Engines.

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BOSTON, U. S. A.

Brush Manufacturers for Over 108 Years and
the Largest in the World

A Cistern Filter

By William F. Miller

A PRACTICAL and cheap cistern filter is a four-inch partition wall in the center. It should be built of bricks laid in cement. There should be no crevices in the joints. Do not plaster either side of the partition wall with cement, as is necessary with the balance of the cistern.

The walls should be built at a right angle, with the opening where the water flows in. On the opposite side of the partition is the proper place for the pump. The suction pipe to supply the plumbing system with soft water must also be placed on the opposite side.

A cistern should be cleaned at least every second year to obtain good results. Unless there are strainers in the gutters, leave gather and eventually run into the cistern. In time they will lodge against the filter wall and retard the flow of water through it.

Construct the neck and top of the cistern oblong. Have the opening large enough a person can pass through in order to get inside to do the cleaning. The mistake of making the neck circular is frequently made. Then the opening on either side of the filter wall is too small for the man of average size to enter.

The filter wall is built from the bottom of the cistern to the highest point of the neck. There are some good patented filters on the market. They operate successfully, but often require a good deal of attention after being installed.

When the Floor Cracks

By William F. Miller

THE thin hardwood floor laid on common flooring over a cellar frequently cups or opens at the joints. That is due to the moisture in the air in the cellar. To prevent this, cover the entire sub-floor with a heavy building paper before the finished flooring is applied. This will reduce the possibility of the wood's swelling to a minimum.

There is often an unsightly opening in a beautiful hardwood floor. You do not know the cause of the crack. Sometime it will close tight in the summer and open wide in the winter. That is caused by the wood's swelling in the warm season and drying in the winter when the room will have uniform heat. In most cases, if the common flooring had been covered with heavy building paper, the crack would not have occurred.

Good Bridges

By A. H. Pulver

CONCRETE is rapidly replacing the rural wooden bridges of the country. The one illustrated is located in Wayne County, New York, and is on a trunk line crossing New York State, so for this reason the type of construction has perhaps been



Nowadays concrete takes the place of the wooden bridge

a little more substantial than ordinarily found on less important highways.

The bridge replaces one that had always given much trouble, especially in freshet time. It has a span of about 25 feet, has iron girders in the driveway foundation, and for the job 400 barrels of cement were used. Including the removing of the old bridge, grading, etc., the finished cost of the new bridge was about \$2,000. Even at this seemingly high cost it is expected to make good on the investment from the complete stoppage of all repairs and upkeep.

Judging Used Cars

By W. V. Relma

RECENTLY I sold a car to a man who did not enter into the transaction at all. He sent an expert around who was to select and buy the car as his own. This expert was very arrogant. The car needed certain adjustments that the expert totally failed to discover. He spent a great deal of time on other parts of the car and missed these details entirely. He nevertheless bought the car exactly as it was. Now, if the real buyer had come to me direct and told me that he did not understand a car and described just what he wanted, he would have got the car with the details mentioned all corrected and in better condition than when delivered to the "expert."

When a man buys a used car he should



The automobile has no equal for business and recreation trips

Remember it can be doctored in a good many ways. The usual thing is first to paint the car. Frequently the paint covers great many evidences of excessive wear not otherwise discernible.

The car body proper can be painted and made to look very nice if properly done. The top, whether of mohair or ordinary rubber, can be dressed and renewed. The cushions and backs of the seats are frequently repainted or dressed and made to look fresh and nice. The radiator can be painted and defects partially covered so as not to be discovered by the casual observer.

Incidentally, the radiator is sometimes treated with various compounds so as to stop leaks temporarily and cover up any damage done by freezing. The engine itself can be painted so as to cover defects in the casting which have been welded or are defective.

A car I have in mind which had a broken frame was repaired in a makeshift manner and then a tool box was put on in such a way as to obscure the defect entirely.

Frequently a used car has the top down when offered for sale, and it is very carefully covered by a top hood. This indicates that the general condition is bad or that the bows are broken.

Prospective buyers seldom criticize the things that are of the most importance. I have sold hundreds of used cars, and not one in ten makes a really skillful examination.

A car may have the numbers changed so that it appears newer than it really is. Putting an extra amount of oil in the crank case will frequently make the motor more quiet than usual. The addition of ground cork to the gears in the rear axle or the rear box in the sliding gear cars will make them much less noisy, and is really beneficial. However, if a car has little power and will not run smoothly, nothing can be done to it to make it do so.

Sometimes buyers have been deceived about the ignition of a car. The car would be supposed to have a magneto in good working order, but the buyer would later find that the car had been demonstrated upon the starting batteries and would not run well or at all upon the magneto.

The seller is very prone to tell how young the car is. The buyer is also prone to want to buy something young. When it comes to the matter of buying, you are buying the unused mileage of a motor car. You are buying what the car is yet good for, not what it has done.

Sometimes one year's model is so similar to the following year's model that a very few changes will make it look just like the newer model. Bodies are sometimes changed, but usually this is beneficial, as no one would be likely to put on a body any poorer than the one removed, and bodies as a rule are rather expensive.

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The Mystery at Glen Cove

[CONTINUED FROM PAGE 10]

evidences of our ruse were discernible. The talk soon shifted to other matters.

When we had finally been conducted to our room, with the door locked behind us, I turned to my companion, my heart palpitating.

"Now then," I cried, "may I not know what it's all about?"

Steele laughed exultantly.

"It worked, Jimmy, old top!" he exclaimed. "You're a brick!"

"I'm glad of that, of course; but what worked?"

"I've got it, by thunder! I've got it!" He broke into a gay whistle, executing a pirouette of joy before me.

"Got what?" I demanded, with what must be conceded was quite justifiable irritation.

"I told you, Jimmy, you old mutton-head, that I had a hunch as to why we were guests in this tavern. When smoke began to drift down into the room through the fireplace I gave a panicky yell of 'fire!' Our friends took the hook—and got excited. The disturbance didn't last long—only about eighteen seconds—but it was long enough. You see, there was a desk in the corner I'd had my eye on for some time, and when you went up-stairs I contrived to edge over to a strategic position. Well, everything went through on wheels. M. LeCoq and his pals got excited; and I got—this! Do you realize what it is, Jimmy? It's the papers in the case, old boy—the documents, by thunder!"

With a triumphant gesture he thrust a crinkled sheet of paper toward me. On it were half a dozen typewritten lines. I had read them two or three times before their tremendous significance filtered through my excitement-blurred vision. Then my heart almost stopped beating. I sank into a chair weakly.

"W-what can it mean?" I gasped incredulously.

The smile faded from Steele's eyes and his brow grew thunderous.

"I haven't got that far, Jimmy," he murmured. "I can't tell you what it means. But we've learned one thing for certain—the trail we've stumbled on leads direct to Washington, D. C."

"But the signature! What do you think—"

"I'm thinking," murmured Steele, ominously quiet, "that a certain distinguished member of the United States Government is going to have some very tall explaining on his hands when I begin to talk to him."

IT WAS beyond debate that we had, through Steele's amazing ingenuity, become possessed of an extraordinarily valuable clue, and I expressed an ardent hope that we might follow it up without delay. Steele laughed at my eagerness.

"In the first place," was his sarcastic rejoinder to my brash enthusiasm, "we need a lot more information before this particular clue becomes useful. The Honorable Mr. Bigwig isn't going to tell us all about it just because we ask him. Then, too, following clues is not quite in harmony with our present circumstances."

I sighed dismally.

"What do you suppose is the duration of our sentence here?"

"Probably longer than we intend to stay."

"Longer than we hope to stay," I corrected.

"No, you old pessimist," he answered with a faint smile; "I intend to leave not later than to-night. In about an hour from now I expect to be taken violently ill. At the first symptom you will knock on the door, summoning aid. When one of our friends—I'm counting on its being only one—comes to inquire, you will lead him to my bedside. I shall have lost my voice, and he will be obliged to lean over to catch my whispered message. That movement on his part will cure my mysterious malady at once, and I shall endeavor, to the best of my ability, to strangle him. You, throwing your bulk on top of the poor chap from behind, ought to complete the job. Here is a pretty fair rope, made from a linen sheet, with which we can make him hog-tight. And when that is done, Jimmy, we will move on to more congenial surroundings."

"They are provided with weapons, you know," I suggested.

"To be sure," he replied calmly. "And they're by no means above using them. But we've got to take the chance."

At about half-past twelve Steele rose and stretched his arms.

"Well, Jimmy," he said placidly, "you might as well ring up the curtain. I feel a great weakness coming over me." With a grim chuckle he climbed into his bed and pulled the covers around him.

I knocked firmly at the door. As there was no immediate response, I repeated the signal more vigorously. In a few minutes I heard footsteps outside, and a voice inquiring none too amiably for an explanation of this midnight disturbance.

In a voice trembling with excitement I told my little story. The door opened, and I was greatly relieved to see only one figure, ghostly white, against the darkness of the hall.

"What seems to be the trouble with him?" he inquired with a genuineness of sympathy which made me feel rather ashamed of the trick we were about to play.

"Something he—er—ate, I suppose," I replied nervously. "Acute indigestion no doubt."

THE detective proceeded to play his part as if he had been rehearsed by Steele himself. He strode directly to the bed and leaned forward, exactly as expected.

Like a flash Steele's powerful arms shot from their hiding-place, and twined around their victim's neck. Caught off his balance, the unhappy man fell forward, his sudden, startled cry effectually stifled in the bed-clothes. At the same instant I threw myself upon him from behind, and in the twinkling of an eye we had gagged and trussed him thoroughly with the knotted sheet.

Our shoes in our hands, we tiptoed out of the room. The poor fellow's eyes followed us reproachfully.

"Sorry we had to do it, old man," whispered Steele. "But it's all in the game, you know."

The stairs creaked alarmingly at our descent, and I feared every instant that our flight would be discovered. It was not, however, until we were safely on the grass outside, running at top speed, that we saw a light up-stairs and heard the patter of excited feet.

"Safe, I think," panted Steele when we paused for a moment to regain our wind. "It'll take a few minutes to unwind our friend from his shroud. And then they won't know which way to follow us."

"But they'll take it for granted that we'll make for the railway station," I complained between my labored gasps for breath. "Why can't they call a machine and be there waiting for us when we arrive?"

"With your usual acuteness, Jimmy," he said, "you may have observed that the telephone wires entered the house not far from our window."

"And you cut them?"

"Exactly."

There was manifestly nothing more to be said on that topic, and I fell in silently beside him as he resumed his flight through the darkness. We were just in time at the station to catch a train for New York, and within the hour we counted ourselves securely lost in a small hotel of the great metropolis.

In the morning Steele laid out his plan of campaign for the future.

"It seems to me," he explained, "that the first move is to follow up the yarn of your doctor friend. I have a notion that if we can find out what Agatha Burchard has to do with this business, and who the singular Mr. Carter really is, we'll be getting very close to a solution of the whole problem."

"Then let's start at once."

"All right. But you mustn't forget that our White Plains friends may not be through with us. If we're wanted, the most logical place to find us would be the Cove. I think, therefore, that you and I ought to separate for the time being. I'll go out to Mrs. Carey's boarding house and you can put up at the Yacht Club. We'll use that as our rendezvous. Keep it in your mind all the time, Jimmy, that you may be followed. Be discreet, old boy! Be discreet!"

Upon our arrival we separated immediately, determined that, although working independently, we were to concentrate our efforts upon the part which Agatha played in the mystery. I, being an old friend of the family, was to make my inquiries by way of the front door, in contradistinction

[CONTINUED ON PAGE 42]

How to Save Labor

By William Johnson

IN EVERY township there will be found one or more farms which employ less labor than many of the smaller farms, yet produce as much per acre and more man. There are two such farms near home, and I have learned more from studying the management of them than from all the literature on farm management I have read in the last ten years. One in particular comprises about 200 acres, and is operated solely by the owner and his two sons, who are thirteen and fifteen years old. Extra help is hired at any season. They never seem to be overworked or badly handled, either.

The first striking thing about this farm is the way it is laid out. The buildings are centrally located, and the fields large and easily accessible from the farm yard. This saves considerable time going back and forth and in working the land. Small fields eat up time in turning around.

The next big thing is the wide diversification of crops. This distributes labor over a large portion of the year. Rotation has several advantages over those relating directly to labor-saving, but right now we are more interested in saving labor. Rotation saves labor, too, in a way not commonly considered. With free use of manure and other sources of humus it keeps the soil in fine tilth, mellow and dark. The soil warms and dries quicker than soil in humus, and it holds moisture better in dry times. It does not break up into lumps and clods. Thus it is ready to work earlier in the spring, sooner after wet spells, and makes a better seed bed with less work. That may mean a week or more of time saved and gained on a moderate-sized farm every spring.

One of the most valuable tips I ever got from the owner of this farm gave me. "Finish what you are about," he said. "It sounds simple, doesn't it? But just try it." Lots of men who have a couple of empty fields of corn or potatoes will "give a lick," then rush to the other, and

back to the first. Haying, or maybe early harvesting, comes on, and they have neither field cleaned, but must leave them both.

Just try doing a thorough job as you go. If you don't get over all of it, what you do get over will do more good than all of it half done. But you will actually cover more ground. I speak from the experience of both methods.

By figuring ahead, a man will find many ways of saving labor. One year we had a field to manure to which it was very unhandy to haul loads. We side-stepped a lot of work by hauling corn out to that field and feeding it to hogs in self-feeders. The self-feeders were moved around, and the hogs did a good job spreading the manure.

Self-feeders will be found a big help in solving the labor problem on most every hog farm. If you give the hog access to the right feeds, he will balance his own ration as well as it can be done for him, and save the work of handling it. Hogging down corn is another labor-saving feeding method that should be more widely employed. It may sound like a shiftless practice, but results have proved that it is more economical from the viewpoint of profit than husking out all of the crop and feeding by hand. Of course it has got to be done right.

One big way to save a great deal of labor is to take care that nothing is lost through neglect or carelessness into which labor has gone. Disease, fire, lightning, rats, mice, predatory animals, vermin, and like things destroy the result of days of work on many farms every year. The result is the same as hiring a man to do something that yields no profit.

Forethought is as great a labor saver as any of the necessary equipment we buy for that purpose. It sees the need or the danger that is ahead, and provides for the one and heads off the other. The man was not far wrong who said that more of us would be well off if our foresight was as good as our hindsight. Practice helps to make it so.

Your Farm Good to Look At?

By John Coleman

ASK a dozen men who have paid for their homes under difficulties how they did it, and the chances are that you will get a dozen answers. I think one fine old man in our neighborhood, who has succeeded above the average, gives as wise a reason as any. "I just tried to make my place so beautiful that I couldn't bear to lose it," he says.

There is good, sound sense in that. A man will put up the biggest kind of fight to keep anything that he loves and takes pride in. There is no doubt that it is the reason the soldiers of France have for their beautiful land that makes them the splendid fighters they are to-day. The love of beautiful things is deeply implanted in the heart of every normal person. When beauty has been created by their own efforts, the thought of losing it stimulates them to exertions they could not otherwise make.

I said this man whose words I have quoted had been more than ordinarily successful. I do not mean in terms of money, though he has a fine little place, well equipped, and some cash ahead for a rainy day. Other men in that same neighborhood are richer in the things we commonly mean when we use that word. But none has been a better father or citizen, or a stronger influence toward making the neighborhood a pleasant place to live in. They are more happily situated than this man and his wife in the evening of their years. Their children are all on farms close to the old homestead, and they visit back and forth to the old home they grew up in, bringing a younger generation with them to make the music of young voices about the well-loved old place.

None of that family left the farm to go to the city. When they started out for themselves they took to farming as naturally as ducks take to water. I count that one of the greatest factors in this man's success, and it was due, beyond a doubt, to his policy of "making the place so beautiful that he couldn't bear to lose it."

This man has had ill health to contend with, sickness in his family, doctor bills to

pay, and other losses; but he never got sour or hopeless. And his wife was of the same fine mettle as himself. Together they worked through the years, adding a little more each season, sometimes only by the greatest effort, to what they had done before, but always adding that little. Perhaps it was a few fruit trees planted out, an unsightly stone pile or thicket removed, a neat bit of fencing done, or a little painting or home carpentry. But the end was gained. People drove out of their way to see that little farm. Many have offered several hundred dollars more for the place than it is, apparently, but not actually, worth, for beauty has a value.

And the place is beautiful. In one corner of a quiet generous orchard the quaint old New England style farmhouse is set. A pretty sweep of lawn surrounds it, and trees are set here and there about the grounds in carefully considered locations. A curved graveled drive leads in from the main road. From corner to corner of the farm there is no unsightly fence row, thicket, stump, or stone pile. There is nothing fancy, no useless frills, but a world of soul-satisfying neatness, order, and pleasure for the eye.

What a flower garden the lady of that house has had in years gone by! It is beautiful yet, but less elaborate—mostly perennials now, because she is not able to give it the attention she once could. The memory of its glories is talked of yet all through that countryside. For thirty years no wedding, christening, funeral, or like occasion took place in that community without bountiful floral decorations from this fine old-fashioned garden.

Many of us are inclined, sometimes, to neglect the beautifying of our homes, and I cannot feel otherwise than that we are making a mistake. I believe we would keep more of our boys and girls on the farm, and be less inclined to move to town ourselves, after having made a little money, if we surrounded our homes and our work with more beauty. It need not cost a lot nor take a great amount of time. The will to do it is the most important thing.

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Just fill out the coupon below. Mail it to us without a cent of advance payment. We will at once send you a Majestic Separator for you to use as your own for 30 days. Put it to the severest tests. Skim warm or cold milk with it and see how closely it skims. The direct Babcock Test (the severest known) proves that the Majestic gets 99 and 99-100% cream from whole milk—practically 100%. Notice the simplicity and solidity of construction—nothing to get out of repair and built for a lifetime of service. See how easily it runs—how quickly and easily it is cleaned. If you decide to keep it, make the first small payment 60 days after it arrives and pay balance in 5 equal 60 day payments, giving you a full

Year To Pay No Interest

If for any reason at all, you decide not to keep the separator, return it. We will pay freight both ways. The Majestic has the latest improved combined disc and wing bowl that not only gets the most cream but also skims it in better condition. Does not break the cream globules, as so many separators do. This means better quality butter—more profits for you. Remarkable inside automatic oiling device which insures perfect lubrication under all conditions. Absolutely impossible for the slightest particle of oil to come in contact with cream. Famous French helical gears produce tremendous speed of bowl—8,000 revolutions per minute—with just moderate turning of crank. No matter how much you pay, you can't possibly get a more durable, more practical, more efficient or easier to run cream separator. It is a mechanical marvel throughout. Order the size you want. You run no risk. Judge the merits of the Majestic for yourself. If it isn't all and even more than you expect, don't keep it. Send it back. You can't possibly lose.

Your Choice of 4 Sizes—No Money Down

No. 452AMA6. Capacity: 375 lbs. Terms: \$9.15 in 60 days; balance 5 equal 60-day payments, each \$9.15. Total price \$54.90
No. 452AMA7. Capacity: 500 lbs. Terms: \$10.50 in 60 days; balance 5 equal 60-day payments, each \$10.45. Total price \$62.75
No. 452AMA8. Cap.: 750 lbs. Terms: \$11.65 in 60 days; balance 5 equal 60-day payments, each \$11.62. Total... \$69.75
No. 452AMA9. Cap.: 1000 lbs. Terms: \$12.65 in 60 days; balance 5 equal 60-day payments, each \$12.62. Total... \$75.75
For the average we recommend the 500 lb. size.

THE HARTMAN CO. 4039 LaSalle Street
Dept. 1594 Chicago

Ship Majestic Separator No. lbs.
capacity. If satisfactory, I agree to pay one-sixth the price 60 days after arrival and balance in 5 equal 60-day payments as stated in this ad. If not satisfactory, I will return Separator 30 days after arrival, you to pay freight charges both ways.

Name.....
Address.....

You are sure of a square deal if
you mention Farm and Fireside
in answering advertisements.

Tips on Trapping for the Boys

LOTS of you boys on the farm get discouraged because you don't think the hide dealer pays you enough for the skins you trap. I certainly remember that I had that feeling, and maybe I have learned some things about how to handle the skins to get more money out of them, that I can pass along to you.

Always remember that the hide dealer wants to pay you as much as he can. Not that he has money to throw away, but the better a skin is the more he can afford to pay you for it.

And it's up to the farm boys to do a good job of trapping, because, while there are many professional trappers who make their living at the business, the farm boys' catch every season is a lot bigger than the professional catch, and the market depends on it every year.

Of course, I know you have to go to school and do chores, and that you can't spend all your time with the traps and the hides. It was that way with me, but I learned that the time I put in was the same whether I used a little care or whether I didn't. I also learned that the price I got per skin was smaller for the simple reason that I didn't know how to take care of them properly after I had caught them. What I want to drive home is that every extra minute you put in on skinning and curing your hides carefully will be paid back to you in dollars and cents.

I was like the general run of boys: I thought the main thing was to catch the animal. What I did with it afterward didn't seem so important. Perhaps your first year's trapping experience was similar to mine—rather discouraging. I began to think I was a failure along that line. One day I sat down and asked the fur company to which I had been shipping my stuff why I didn't get a better price. Their answer summed up to one thing: They told me I was too careless in my skinning and curing methods. After I had thought it over I decided they were right, and from then on I made up my mind I would do my part, at least.

ALL the skins from the smaller animals as such as muskrat, mink, skunk, weasel, etc., I "cased"—that is, I mounted them on boards of a proper width to stretch the skin tightly; and you may be sure there were no splinters in those boards that would puncture the hide. I had my casing boards of several widths in order to accommodate different sizes of skins. Be careful you don't make one mistake which I did, however. When I made my boards I failed to get them quite long enough, and had to attach wires to hang them up by. These wires were always getting in the way, and finally I had to discard my entire lot and make new ones. These I made long enough so that I could bore quite a large hole in the end and slip them over convenient pegs in the wall.

While you are skinning your catch be mighty careful not to pull any holes in the hide, and in places where you have to use a knife, cut toward the body of the animal, and not toward the skin. I found that just a tiny hole made a lot of difference when I got my fur check.

You probably mount your skins just as I did, flesh side out. As soon as I got mine mounted, and before they had time to dry to any great extent, I carefully removed any flesh or fat that had stuck to them from the skinning process. I found that this was important, as all such material left on would tend to retard the drying process, and was very apt to weaken the skin underneath. After I got them properly mounted I got Dad's permission to hang the boards up in the driveway of the corner. I'm sure you can work your dad the same way.

Here is another point you might remember, one which it cost me something to find out: There is a market for skins, just as there is for eggs or wheat, and the closer you keep in touch with that market the more you will get for your pelts. It is a good plan for you to write your dealer and find out what he wants. I found that certain pelts sold better at certain times of the year, and the dealer will be glad to give you all the information he can. Remember, too, when you think you got a pretty small price for your stuff, that there are many, many processes and treatments which every skin has to go through before it can appear in the shop windows, and the higher price asked there includes much more expense than the mere buying of the skin from you.

Dont Send a Penny

These Leu-Mort Work and Outdoor Shoes are such wonderful value that we will gladly send them to you at once, no money down. You will find them so well-made and so stylish and such a big money saving bargain that you will surely keep them. No need to pay higher prices when you can buy direct from us. Why pay \$5 and \$6 for shoes not near so good?

Great
Shoe
Offer

me man outd. work as well modern Built on sty Blucher last. special tanning process makes the leather proof against the acid in milk, manure, soil, gasoline, etc. They are soft and easy on the feet. Made by a special process which leaves all the "life" in the leather and gives it a wonderful wear-resisting quality. Double leather soles and heels. Dirt and water-proof tongue. Heavy chrome leather tops. Just slip them on and see if they are not the most comfortable, easiest, most wonderful shoes you ever wore. \$3.95 for shoes on arrival. If, after Pay only \$3.95 careful examination you don't find them all you expect, send them back and we will return your money. Order by No. X15012.

SEND your name and address, and be sure to state size you want. You be the judge of quality, style and value. Keep them only if satisfactory in every way. Be sure to give size and width.

LEONARD-MORTON & CO., Dept. X2109, Chicago



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WE pay the Market's Highest Mark. Are absolutely reliable—established 1853—capital, \$1,100,000. Write at once for FREE Price List and Booklet, "Successful Trapping." Postal will do.
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(3636)

My Farm and Fireside Index

By M. E. Weaver

LAST January I decided to make a convenient workable index that would enable me to turn readily to any subject in the year's file which I invariably keep.

I made use of an inexpensive blank book containing about 800 pages. I indexed the blank book by putting A at the end of the top line of the first page, and then I trimmed this page from the A to the bottom of the page. The second page I marked with B at the end of the second line, and trimmed it to the bottom of the page. On page three I put C, on four D, and so on through the alphabet, and trimmed the pages as I marked them.

The first one hundred pages I marked Poultry, the next one hundred Orchard, one hundred for Household, one hundred for Garden, one hundred for Autos, one hundred for Stock, fifty pages for Home Devices, and one hundred for Farm Work.

I entered the articles in the index book like this: The article on "Asparagus" in the January number on page 17 of FARM AND FIRESIDE I put under A. I turned to A and wrote, "Asparagus, page 400;" then I turned to 400 and wrote:

Date	Subject	Page
1-2-17	A Long-Lived Crop	17

The article on "Lath Tomato Supports" I first put under T in my index book. There I wrote, "Tomatoes, 400," and under the other article I wrote:

Date	Subject	Page
1-2-17	Lath Tomato Support	15

Under N, I put "Nails, 700," and on page 700 I put:

Date	Subject	Page
1-2-17	Useful Nail Kinks	15

As I read each article I entered it, and now I have a ready reference to any article I want in the year's file.

After I had read the magazine it did not take me more than ten minutes to index the entire number.

Cost of a Bushel of Oats

By F. S. Lenhart

FOLLOWING are the figures showing cost of producing 14 acres of oats: Every hour of work, whether performed by man or horse, was kept account of, and charged for at what we thought to be a reasonable rate—55 cents an hour for a man with a team and 30 cents an hour for a man. When a heavy machine was used, such as the drill and binder, requiring three horses, 65 cents an hour was charged, which included the operator's wages.

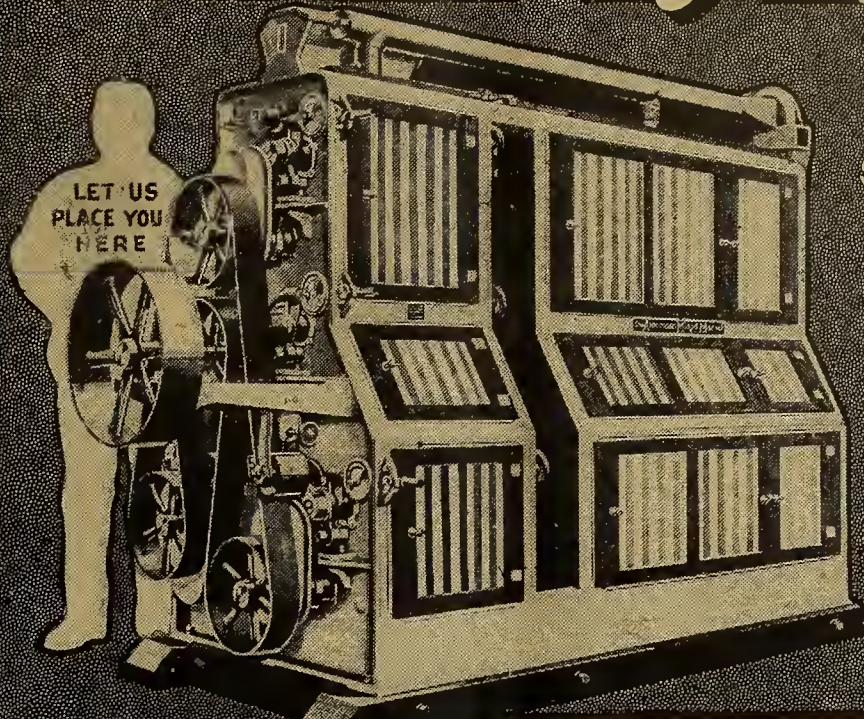
Forty-five bushels of seed oats were used, being purchased of a neighbor, and after making a germination test we found that approximately one third of the oats would not grow. We sowed the seed because it was a new variety, and got rather a thin stand of oats, as will be noted in the yield. No preparation was given the ground before seeding. The breaking of cornstalks was charged to the oats. The ground for which we gave a share rental of two fifths is in a somewhat run-down condition. The amount left over, after all work was paid for at the above mentioned rate, is labor income, but to make the showing complete, there would have to be overhead charges considered in value of land, taxes, upkeep of fencing, draining, etc.

FOURTEEN ACRES OF OATS, 1916

	Hrs.	Rate	Cost
Breaking cornstalks.....	4	\$0.55	\$2.20
45 bushels seed oats at 75c per bu.....			33.75
April 10-11, Seeding oats, 3-horse drill.....	15	.65	9.75
June 8, Cutting dock in oats.....	15	.30	4.50
Aug. 2-3, Cutting oats...	15	.65	9.75
Aug. 2-3, Shocking oats...	30	.30	9.00
Aug. 25, Threshing and marketing.....	3½	10.50	36.75
Total.....			\$105.70

Yield of oats, 461 bushels; average, 32½ bushels an acre. Oats sold at 75 cents per bushel, \$345.75; share rental of \$, \$138.30; tenant's share, \$207.45; less cost of production, \$105.70, leaves a net income of \$101.75. Cost of producing and marketing 14 acres oats, \$105.70; cost per acre, \$7.55; cost per bushel, 23 cents.

Own This Paying Business



Earn From \$500⁰⁰ to \$1000⁰⁰ Per Month

YOU, without previous milling experience, can earn big money with this one-man, short-system, roller flour mill.

Here is the best paying business in your town and second only to that of your banker in prestige and dignity.

You can be the local flour miller of your community with but a comparatively small investment, and have light, easy, indoor work and an all year round business.

Everybody wants good flour. Why not furnish it from wheat grown at home, milled at home, sold at home, to home people? You save freight and earn regular milling profits and in addition the extra profit of making Flavo Flour on the American Midget Marvel Mill. We start and guide you to success in this profitable business.

FLAVO [America's Community] FLOUR

You are given the free use of this brand. We advertise it for you. We start you in business with our Confidential Selling Plans and our Service Department, composed of a corps of skilled milling and flour experts, examines samples of your flour each month, thus enabling you to keep your product up to our high FLAVO standard.

The American Midget Marvel Mill

is the wonderful, self-contained, one-man flour mill that performs all the milling functions within itself — grinding, bolting, and purifying. It is so simple that we teach you in just a few demonstrations how to successfully operate it. A handsome machine, so sturdily built that it will last a lifetime. It requires but one-half the power and but one-fourth the labor of the old long system flour mill. It requires but very little space and can be installed at very little expense.

Because of its improved, patented, short process, this wonderful mill produces a great yield of creamy white flour that is superior to most flour — a flour that creates a demand for itself. It retains most of the wheat oils in which reside the full nutrition and nutlike flavor of the wheat berry.

The American Midget Marvel Mill is built in seven sizes — from 15 to 100 barrels daily capacity. It is sold on a 30-day free trial, you to be the sole judge as to whether it comes up to your expectations. Thus you are enabled to operate it and be assured of success before buying.

Over 1,500 of these mills are earning unusual profits for their owners throughout the United States. Here is an opportunity for you in your town if you act at once.

Write today for catalog and full particulars, with our free booklet, "How We Make You Succeed."

Anglo-American Mill Company
Owensboro, Ky.

Write
To-day



Anglo-American
Mill Co., 519
Central Trust
Bldg.,
Owensboro, Ky.

Gentlemen: Please send me full particulars regarding your mill, also your free booklet, "How We Make You Succeed."

Name.....
Address.....
City..... State.....

How Does the New Year Find You?



Are you farther ahead than you were a year ago? Be honest with yourself: Are you getting somewhere—or is it the same old grind?

Here are six young men—all from the same Pennsylvania town, who, like you perhaps, were not always earning an average of \$50 a week. They did not always have the same extraordinary future to look forward to. Only a few months ago one of them, Frank Bennett, was working in a sand quarry for small wages. Another, William Woodruff, was driving a tea wagon.

It happens that one of the boys, Walter Kaley, inquired of Farm and Fireside for a proposition to act as representative. He was then working in a machine shop. He undertook the work, and was so amazed at his success that he induced the other five to join him. None of them now earns less than \$50 weekly.

We can offer you a proposition that will afford the same extraordinary opportunity. If you really want to earn more money, then fill out the coupon to-day.

Agents' Dept., Farm and Fireside, Springfield, Ohio

Farm and Fireside, Agents' Dept.
Springfield, Ohio

Dear Sirs:
Please tell me how I can earn \$50 weekly.
Name.....Street or R. F. D.....
Town.....State.....

CHILDREN OF THE MOVIES



AND here is Stephen Carr. Thousands of mothers nightly make prayer that their cradled Alonzo will grow up into eight-year-old boys just like Stephen here. Nowonder Onemoment finds Stephen delaying the burglar with childish prattle while Aunt Hattie slides down the bed sheets to alarm the police; the next he is unearthing that German spy nest and saving his country. Or else—or else—Wouldn't you like to have a little Stephen in your home? We would. A nice, real, all-round boy, Stephen, guaranteed suitable to any variety of home or any variety of parent. But we wouldn't want him round the office. We want to keep our job.



HERE, readers, is Ivy Ward, delineating of Ihlen and Sardou moving-picture dramas. She is three and a half tender summers old, is Ivy. But when she wants relaxation, does she start throwing all her toys on the ground? Not so. Instead she calls for a reel in which she has figured, and watches herself expertly and critically, picking out any flaws she may find in her work. "I have so much to learn yet," Baby Ward says modestly. Think of all the actresses a dozen times her age who wouldn't admit that for the world.



"YOU know, Mother, blue never screens, and simply ruins my flesh tints," Peaches Jackson was saying to her parent—not perpetually, but gently and firmly—while Mrs. Jackson posed the three-year-old star thus. One thing the films do teach a child is the necessity of being firm with its parents. This is not to say, of course, that the child is not willing to make any reasonable concessions if it will help the parent to be better and wiser; but one thing that must be eliminated is old parental prejudice. "What could be sweeter?" Mrs. Jackson was saying, helplessly, anent baby blue. "Blue ages any one," stated Peaches in a tone of finality, and that ended it.



OF COURSE that terrible and confusing question—something didn't say anything about "Have you a baby in your home to support you in case you are called to war?" So Bob Blum, father of the Rosebud here, whispering to Miss Elsie Ferguson that she is losing a hairpin, decided that he would have to claim exemption because of Rosebud and Maria. But Rosebud, at three, rose up and said: "Don't be a slacker, Father. Remember, I'm here. I'll care for home and Mother."



THIS is Bob White, aged two, registering his idea of how a Belgian child ought to look when a German general says, "Off with his mitts!" Bob, incidentally, is the youngest star in the movie milky way; but, then, he comes by his talent naturally, George Beban being his father.



"ISN'T she reminiscent of Matthew Arnold's 'Sweetness and Light'?" remarked the press agent as he presented us to Miss Kittens Reichert. Miss Reichert affected not to hear this, merely commanding with simple childish dignity that tea be brought. (In the drama or the movies, one early learns: "When in doubt play the 'Rosary' or say 'Tea, James!'" Miss Reichert's favorite rôle is "The Eternal Sapho." "Next best," she hisps, "I like 'The Scarlet Letter,' then 'The Sins of Men,' then 'The Tiger Woman,' then 'The Fool's Revenge,' then 'The Primitive Call.'" With Kittens on tap, Theda Bara won't have to worry about someone to take her place.



WE always went on the principle that two of anything was better than one, save in the case of twins, until we met "the most precious hits of star-dust in the films," the famous Lee sisters, Jane and Katherine. Of course every golden cloud has a dash or two of gloom in its glitters. We realized that when Mrs. Lee told us that the devotion of Jane and Katherine was such that they always simply insisted in having everything in pairs, including whooping cough and tantrums.

AND now the moving-picture child at home. Here's Baby Aida Horton improving a shining hour or two by dashing off a little hemstitching that really, my dear, should have been done weeks ago. Like actresses, babies have to be left a good deal to minions or hirelings, of course; but Baby Aida Horton does her best to keep the proper balance of things by superintending everything. "Nothing like the personal touch," says Aida.



SOMETIMES—as when we have to buy shoes for two of the children out of one week's salary—we can't help wandering where all the luck goes to, anyway. Here's Bobby Connelly, aged eight, snapping the elastic on his own check-book, keeping his family friendly with the Red Cross, able to say to his parents if Wall Street flutters or the delicatessen business totters, "Say, old man, would a 'thou' help you out?" and taking forty débutantes out to lunch just as casual!

WE HAD our picture taken once for Grandma's birthday. It looked just like the one to the right. We remember vividly, though, how our little sister bit us just as the photographer said "Finished." Does little Francis Carpenter look low in his mind because he fears that Virginia Corbin is going to bite him in a minute? We hope not.

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"America's Headquarters for Field Seeds"

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EVERYTHING for the GARDEN

is the title of our 1919 catalogue—the most beautiful and complete horticultural publication of the year—really a book of 184 pages, 8 colored plates and over 1000 photo engravings, showing actual results without exaggeration. It is a mine of information of everything in Gardening, either for pleasure or profit, and embodies the result of over seventy-two years of practical experience. To give this catalogue the largest possible distribution we make the following unusual offer:

Every Empty Envelope Counts as Cash

To every one who will state where this advertisement was seen and who encloses 10 cents we will mail the catalog

And Also Send Free of Charge
Our Famous "Henderson" Collection of Seeds

containing one pack each of Ponderosa Tomato, Big Boston Lettuce, White Tipped Scarlet Radish, Henderson's Invincible Aspers, Henderson's Brilliant Mixture Peas and Giant Waved Spencer Sweet Peas, in a coupon envelope, which, when emptied and returned, will be accepted as a 25-cent cash payment on any order amounting to \$1.00 and upward.

PETER HENDERSON & CO. 35 & 37
CORTLANDT ST.
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Get this guide for growing a Victory Crop. Shows you how to get the best seeds that money can buy at money saving prices. It's written by experts and takes the guesswork out of planting. America needs all the food you can grow, and will pay high prices. Good seed is of first importance.



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For Garden TRADE MARK For Farm

40 years' experience backs Isbell's Seeds. Ceaseless experiments, careful selection and testing has produced the most hardy, big yielding varieties. Only clean, pure, full life, true to name seed ever reaches an Isbell customer.

Every Ounce Is Guaranteed

Your money back if your own tests do not prove our claims. More than 250,000 farmers and gardeners use Isbell's seeds. You will too if you investigate. Write us today. Catalog FREE.

Free Samples

For your own tests we will send you samples of any Isbell's Farm Seeds—Clover, Alfalfa, Oats, Barley, Timothy. It gives you an opportunity to test Isbell quality and we'll guarantee the seeds you buy will be just as good as sample. Tell us when you write which seeds you want.

S. M. Isbell & Co.

1157 Mechanic St.
Jackson, Mich.



Specialized Gardening

By Lee McCrae

AJAPANESE has taught me the artistic value of limiting my flower garden to one or just a few species, and an American eighty-three years old has taught me the commercial value of so doing.

Ordinarily when once we Americans get a home and a plot of ground we are so wildly anxious to raise a little of everything in flowers that all kinds and sizes and colors are medleyed together, crazy-quilt fashion, to satisfy our flower hunger and our speculative craze to see what will "do best." The result is extremely in-artistic lawn and house decorations, and at the end of the season we do not know any more about one plant than another.

One half-hour spent with old Mr. Flannagan, the gladiolus man of Ramona Acres, in the suburbs of Los Angeles, will convince the most grasping gardener of his mistake in trying to cover the whole realm of culture in one plot.

"Choose your flower and make a specialty of it," he counseled, leading me eagerly to a shed in the rear of his pretty home where there were boxes religiously labeled, holding, literally, bushels of bulbs. "Here is a new variety of gladiolas, all my own—the orchid!" he added proudly. "It is white with a deep purple center. That box holds all there are in the world. But I have many other kinds, of course. All colors. There will be nearly 60,000 gladiolas in bloom on my acre and a half next May. I place the bulbs six inches

joined heart and hands with Nature, the miracle-worker. Backed literally by his acre of bloom, his advice of limited choice is convincing.

Likewise the Japanese about us here, except those on large acreage, restrict their intensive farming to a few varieties, even in vegetable gardens. When raising flowers for pleasure one variety satisfies. It is the chrysanthemum or iris or aster, usually. Absolutely familiar with its culture, they have the rarest specimens, though with many shades and many happy surprises in kinds.

In vegetable raising we want many foods for our tables; but even here we can specialize to a certain extent, especially if we have much space, putting the most of our ground into one vegetable, studying it, and aiming to improve our plants year after year. There is so much to learn about gardening that the novice cannot hope to learn it all in one season.

Currant Trees vs. Bushes

By Sylvanus Van Aken

ARE you planning to set any currant bushes this spring, or thin out and renovate currant bushes needing such improvement?

Hereafter I intend to have all my currants grow in tree form instead of in bush form. Currants grown on shrub-like trees



Here is how we speeded up gooseberry cleaning last summer with a fanning mill. Try it this year

apart, six inches deep, and in rows twenty inches from each other. You see, one must know just how if he would succeed with things. I know gladiolas. We are great friends.

"Now these are Frances Pendletons—see?" referring to a sign at the end of the row. "They are the finest grown and easily worth 60 cents a bulb; but then a mature bulb will bloom almost indefinitely. And here is a row of Princeps, a kind originated years ago by Dr. Fleet, for which he received \$1,000 in gold. Oh, but I could have made a fortune if ten years ago I had had some I have now! But I will reap a harvest next summer with my beauties."

His enthusiasm was inspiring. Yet Mr. Flannagan is not raising gladiolas for mere pleasure and health, though they bring him both in great measure: he is earning his living by means of them. His cut flowers go to the wholesalers in Los Angeles, and shipments of both bulbs and blooms go as far east as Chicago and New Orleans.

"You do all the work yourself?" I penciled on his tablet. The old gentleman is stone-deaf.

"All but the deep plowing. I just read and work, and work and read, from daylight till dark. I raise a few vegetables, but no other flowers. Gladiolas come in such varieties, why should I want others? Take an old man's advice: know your plants and what they need."

Health, vigor, clear mentality, sunshine, fragrant air, beauty, joy in the day's work and a good income next summer are all for this frail little man because he has

are easier picked, and there is considerably less labor in keeping the ground free of weeds than is the case when this fruit is grown in the usual clump form of bushes. Also, the shrub-like currant trees are ornamental as well as useful, and they can be made to add to the attractiveness of the grounds about the home.

To secure the tree form, I start the slips from a single cutting, or else remove all buds but one from the cutting. Even then new buds will sometimes develop, causing side sprouts, which, unless carefully destroyed, will form separate roots and result in bushes instead of the tree form wanted.

Unless the grower intends to give his currants close attention and the best of care, he will gain nothing by growing them in tree form. But for a select special trade the fruit can be easier thinned, and more sunlight and air admitted to the fruit, which aids in getting higher quality and larger sized berries.

Since war requirements cut down our sugar allowance, the currant has been somewhat under a cloud; but this fruit will come back into popular favor. One trouble with currants as grown of late years has been neglect to keep the bushes opened up to the sunlight and air. The overthick clumps of bushes have yielded small fruit of extreme acid flavor.

My plan of training the currants in tree form has nearly doubled the size of the berries, and the flavor is also so much better and milder as to make our different varieties of red currants much appreciated as a breakfast dish with only the lightest possible sprinkle of sugar.

Why I Came Back to the Farm

[CONTINUED FROM PAGE 7]

peaches, every product of the farm belies such statements, and proves by its very existence that the farmer, relatively speaking, is a true scientist, inventor, developer, and business man who has made more progress in the last hundred years in his line than has been made in any other field of commerce and industry.

But to return to the cow: When she was first taken in hand by the farmer she was in the habit of having one calf in the spring and going dry the rest of the year. She gave only about five quarts of milk a day, and this for only a short period of each year. Now, the farmer is giving us from one cow to-day what it formerly took ten cows to produce. All cows worthy the name nowadays are milked from ten to eleven months a year.

Then there are the chickens I so heartily despised. The chicken of to-day is really nothing but the wild prairie chicken of yesterday, domesticated, civilized, and developed by the farmer.

When first taken hold of, the chicken produced naturally only 10 to 14 eggs a year. The hen of to-day which doesn't lay 100 to 150 eggs isn't looked on as much. I believe there are individual records of as high as 200, 250, or 300. All this increased production had to be accomplished and still preserve the vigor of the stock.

The problem of producing a hen which would lay a lot of eggs was easy, but to produce one which would lay a lot of eggs which would not hatch weak, sickly chicks was not so simple.

It is this joy of creating better and better strains of life, both in animals and in plants, that has made me an enthusiastic, whole-souled farmer.

I believe that what I have learned about the farm is the great lesson of life which every one of us must learn in whatever walk we may be; that is, to learn to read character, to know whether the man or the farm product you are dealing with is trying to do the square thing by you.

EVERYTHING in plant and animal life that is valuable and worth while to-day represents growth and development, under man's hand, from the wild, uncivilized state. You know that certain varieties of raspberries will produce their kind if you just bury the tip of the bush in the ground and cut it off near the base when it has taken root; that currants will reproduce from a sprig, and that blackberries grow from their own roots every season. And yet, if you take the seeds of any of these and plant them by themselves they will at once revert to their wild state.

There is a family of maple trees around my house that I get more fun out of than you could shake a stick at. If you were to ask the average man to look at them and tell you what he saw in them, he would look a few minutes and probably reply: "Just maples." But to me every one of those trees has an individuality that has to be studied and watched just like the individuality of a human being, to be understood. There is one old girl who is lazy and dreamy, a sort of genius, I'd say she was. She takes her time about everything and doesn't seem to worry at all. There's another the most energetic, active, hard-working critter I ever saw. She pops up every season two weeks ahead of the others with her leaves.

These are things to study and watch that make my life as a farmer worth living. I have never craved great wealth, nor fame, and the only step I have taken outside my farm life since I came back to it and looked upon it with understanding sight has been my work in the Grange.

Grange work of course has been my contribution to general welfare among my fellow farmers. I think that every farmer owes it to himself and his associates to take an active interest in co-operative work.

The point I want to make is this: It is not only a farmer's duty to join co-operative work among his fellows, but it is to his immediate individual interest, because it gets him out among them where experiences can be exchanged and something may come his way from an associate which will show him how he can do his own farmwork to better advantage.

This is all I have to say. I have tried to set down what I think might prove helpful and encouraging to others who are just starting out in the farming world, or to some who have started and grown weary of the work because they did not understand the fascinating angles of it. If I have succeeded in only one case, I am happy.

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Growing Our Own Seed

By W. F. Wilcox

THE European war has worked out marked changes in the seed business. Heretofore, the United States has relied largely on European growers for the garden and flower seed and bulbs used in this country. We are now steadily demonstrating that we can grow our own seed.

The sugar-beet industry was the first to feel the shortage of seed, and it seemed a calamity that so large an industry, with millions of capital involved, should be so handicapped. Before the war we imported from Germany, Russia, and France about eight million pounds of beet seed every year to supply our needs.

In order to insure a beet-seed supply several of the big sugar-beet manufacturing companies began the practice of storing thousands of tons of "mother" beets in the autumn of 1916, to be reset the following spring for the production of beet seed. This trial proved so successful that the big sugar-beet industry will no longer have to be apprehensive about its seed supply.

One of the sugar companies operating in Colorado harvested 1,600 pounds of beet seed per acre. From one beet-seed crop of 500 acres harvested last year, the value of the seed was close to \$100,000.

The production of high-quality sugar-beet seed is not a simple matter. It requires several years of selecting and testing of the sugar content of the beet juice to make sure of a heavy production of sugar from the beets grown for that purpose. Not less than five or six years is required to breed up a strain of beets to insure maximum production of sugar.

What is true of beet seed is proving possible with garden and flower seed. Until the war interrupted our supply, we were in such haste to overtake the dollar that things so minute as vegetable and flower seed were ordered as needed from abroad.

Now it is being found that we have climate and soil conditions adapted to growing even better seed, with a very few exceptions, than we formerly imported, and this new industry is well suited to fit in with other lines of production as a profitable side line.

One important requisite of seed growing is to get the growers to realize the necessity of keeping the varieties separated in order to maintain seed true to name. Those who are entering this new field of production can build up a reputation for pure seed that will make for much future profit, or by careless growing their seed crop must soon go a-begging.

The great arid regions of the west are more and more coming to be the centers of seed production. Control of moisture by irrigation, unlimited sunshine, and soil deep and fertile, all favor production of hardy, vigorous-growing seed.

In Colorado and other Rocky Mountain States wholesale methods of seed-growing have now become a regular industry. For example, cucumbers are planted with corn planters in areas of 5,000 acres and upward, and other cucurbits in proportion. When ripe they are gathered into windrows and threshed by machinery, and the seed pulp is fermented, separated, dried, and bagged in similar wholesale fashion.

When world peace is restored, much American grown seed will find its way abroad as well as supplying our own needs.

A Mountain Garden

By Mrs. Maggie Sumner

I LIVE in a Kentucky mining region well up in the mountains. The general opinion here has been that raising garden crops for sale could not be made to pay. We have always known of the importance of a good garden for home-consumption.

Last spring the idea of growing garden crops for sale took possession of me. Our mountain farm being located between two coal-mining settlements, I made my plans to increase my garden-planting beyond the extent of our family needs, of all the table garden crops. When the first vegetables were ready, Husband helped me load a light wagon and I set forth. First an effort was made to sell my load at the local stores, but without success. Then I continued on to one of the mining camps and without difficulty sold my load for \$20. During the season I sold 15 loads of garden truck which averaged the same price and furnished a total income of \$300 in addition to Husband's regular farm crops. Of course, that \$300 to the good means a whole lot more to us up here on a mountain farm than it would mean to a corn-belter.

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Diploma Dug Out of a Garden

By Bertha Snow Adams

ABOUT ten years ago there landed in this country a frail-looking little woman with a retiring manner, a mop of curly hair, and a pair of eager, inquiring eyes. She seemed scarcely more than a girl herself, yet she led by the hand two toddling mites, both under three, and one of them so beautiful that folks turned to look at her a second time; and she had come with them all the way from Russia to make a home for them and herself in this land of the free where one might get an education unmolested.

Her name was Anna Falkoff, and an education was the "big idea" that filled her mind by day and her dreams by night. She made a small down-payment on a two-acre farm in a thriving rural community and, although unaccustomed to country life, set herself to the task of becoming a truck and chicken farmer to occupy the spare moments when she wasn't studying, or caring for her children, or peddling the milk and butter produced by the one cow she managed to get hold of.

Beginning with 50 chickens, she gradually increased her flock till it numbered 500; and while she trundled her wheelbarrow to the country store laden with a case of eggs to be shipped in to the neighboring city, then trundled it back up the



Anna Falkoff at work in her garden

hill to her little farm loaded with a sack of feed weighing from 100 to 125 pounds, she planned out what courses she would take when the time came for her to go to college.

For years this determined little woman struggled on alone, putting in from twelve to sixteen hours a day doing a man's work on her bit of a farm. The neighbors looked upon her college course as a joke, and tried to convince her that a woman with two small children to support had all she could do to make ends meet; but Anna Falkoff only smiled and always dismissed her "Job's comforters" with "Some day I am going to the University of Washington. Wait and see." So folks waited while the indefatigable little woman worked and skimped and planned, and one day they did see—saw her pack up all her meager household furnishings and move to Seattle.

Such was her eagerness to learn that in three years she completed the four-year course, at the same time making up the four years of high-school work she must have before she could receive a diploma.

Then she was given special work in the forestry department of the institution, and her last year's expenses were mostly paid with money she earned from her truck garden on the outskirts of the city. An interested friend put an acre of land at her disposal, the university had it plowed and put in shape, the city of Seattle furnished the seed, and with the cooperation of Dame Nature Mrs. Falkoff did the rest. Something like \$350 was realized from this metropolitan garden from which Mrs. Falkoff delivered fresh vegetables direct from producer to consumer, getting top prices.

Not content with a degreeless diploma, Mrs. Falkoff set out to win a master's degree, and last June it was conferred upon her. Her instructors unanimously prophesied that she will make a name for herself in the country at large because, as one of them put it, "A woman who will work the way she did for an education has got something out of the ordinary in her."



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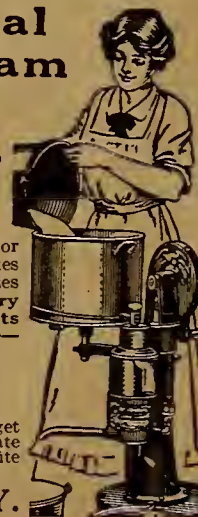
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Careful Milking Pays

By Charles E. Richardson

"I NOTICE when you get to the end of the milking of each cow that you do not do much stripping. Is that the way you generally do?" an experienced dairyman asked me one morning.

"Well, I guess I get the most of the milk," I answered, "and when one is in a hurry he cannot be too fussy."

"I suppose you do not realize how important the final part of the milking is," he told me.

"In what way does it pay to strip a cow?" I inquired.

"In your case," he told me, "you are especially interested in the amount of butterfat you get, for you make butter. Now, the last milk that comes from a cow is particularly rich in butterfat, and if you are fussy and get every drop of the milk, you will find that at the end of a year you will have made an appreciable extra quantity of butter when you have more than four or five cows."

"Yes; I weigh all of the milk that I get," I told him, "and I also test each cow's milk once a month, but I did not think the little that was left by not stripping would be very much. But since you called my attention to it I can see that, while perhaps the loss at one or two milkings might not be much, the total for a year would be considerable."

"All of the record-breaking cows," he said, "are milked to the last drop, and, as I



A time and labor saver

stated before, its being richer in fat, it makes the butterfat record look big when the totals are read."

"It's strange how one will get careless when he is in a hurry," I said. "But I'm going to be more careful after this. I can see you're right."

"Then there is another thing that the ordinary farmer does not do," he added. "He does not know how valuable it is to massage the udder before and after milking."

"Is there any particular method to use?" I asked.

"Well, I suppose each expert has his method, but any sort of a gentle massage around the upper part of each teat, before milking, stimulates the milk flow, and some milkers declare that tipping the bag while stripping makes the milk flow more freely. Anyway, if you practice massaging before and after in an easy, gentle manner, in any way that seems good to you, it will certainly make a better milk flow, and, as in the case of stripping, the totals will prove that it is not a waste of time. If it did not pay to do these things you may be sure that they'd never bother with them, as is done with most of the record-breaking cows."

"I've read of it, but did not know that it would be practical for the dairyman with a few cows," I remarked.

"If it is worth doing for those cows that give large milk production, it is surely good for the common cow," he explained. "And then, again, there are many persons who complain because they have cows that dry off too soon. Now, if they are careful to strip such cows and also massage as I have explained to you, there will be fewer cows that stop producing before they should."

After that I was careful to follow his advice, and I was pleased to find, through the help of the scales and the Babcock test, that he was right, and that my cows on an average gave enough more milk in the long run to pay for the extra work and time. Some day, however, I am going to install a complete and up-to-date milking-machine system.

First Aid to a Horse

AMONG other things neglected in the care of horses in winter are the feed and water. This causes indigestion and impaction of the bowels. It may be prevented easier than cured.

A heaping tablespoonful of sulphate of soda in the feed once a day will help correct the indigestion, and prevent impactions of the bowels. Trouble is ahead for the horse used to considerable exercise that is put in the barn and not given any work. The salts will keep the blood in good condition.

Livery horses are rarely sick unless over-driven. Why is this? The feeding methods practiced by the liveryman, and the exercise the horses get, are the answer. A livery horse is fed a certain amount of feed regularly, is watered regularly, and curried regularly.

When to Shear

By Fred W. Hooper

THE best time to shear sheep is in the spring as soon as the weather is settled. It is necessary to wait for settled weather because there is danger that the animals will take cold. This is especially dangerous if the ewes are suckling lambs. If this is the case, the flow of milk is very likely to stop and the lambs will suffer a setback.

It requires an experienced man to shear sheep by hand, but anyone can do the job with a machine. More wool can be obtained in this way than by shearing by hand. After the fleece has been taken off, the tags and dust should be removed and the wool tied in neat bundles, which are later packed in long wool sacks and held for a favorable market.

Curing Meat

By W. L. Nelson

IN THE making of good meat on the farm, curing is of the utmost importance.

Many farmers make the mistake of allowing meat to remain in the brine too long—to "take too much salt." For hams a good rule is to allow a day and a half for each pound of meat; for instance, eighteen days for a 12-pound ham. This is for ordinary winter weather where the meat is protected from freezing. If the weather is especially severe, or if the meat freezes, a longer time should be allowed. However, meat should not be allowed to freeze, provided it is possible to prevent it. In the "dry salt" method it is a good plan to pack the meat in a box and to repack at least once during the curing period. In repacking, the meat that was on top should be placed near the bottom, so as to insure an even distribution of salt. Bacon or side meat that is to be used before summer should not be left in salt more than a week or ten days. Where bacon is to be carried into hot weather, two weeks' time is an average period. Sides should be split in two, having a thick or heavy, and a thin or light bacon. The "heavies" should be used or sold first, or a better plan is to render these into lard or to use a part in adding fat to the sausage.

Smoking has much to do with the flavor of country-cured meat, and especially hams. In smoking, almost any kind of hard wood can be used. Hickory and apple-tree wood are among the best. The smoking from a smoldering fire should be kept up for a few hours each day for two or three weeks, the object being to allow the meat to take smoke gradually rather than to hasten the process. All meat should be hung some distance above the fire, and bacon should be near the roof of the smokehouse. Smoking should not be done on damp, "muggy" days or in rainy weather.

After the hams have been smoked sufficiently, wrap them in old newspapers and place in flour sacks, then hang up in a dark place. In sacking it is a good plan to first dip each piece of meat in boiling hot water, then rub or wipe dry. Next cover the surface with black pepper. A little borax may also be added, rubbing it in with the pepper. Mold does not injure hams; in fact, a fair coat of mold is regarded by many as a hallmark of a good old ham. Bacon may be treated much as are hams, but is hard to keep from getting strong if kept too long. Personally, we have never sacked or wrapped bacon, but prefer to leave it just as it comes from the smoke. Bacon is best used before the end of the first summer after being made, but a ham does not attain its best flavor under one year.

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Have You Been Swindled?

[CONTINUED FROM PAGE 6]

on each \$100. The company proposed to take over a long idle packing plant, compete with the big packers, and dress stock several hundred miles nearer home than had been the custom. The plan appealed to the farmers; it was right in line with their own work. They subscribed eagerly. When the salesmen came in to report, it was found that they had already sold over \$1,500,000 worth of stock. The company had to amend its articles of incorporation, increasing its capital stock, so as to catch up with the salesmen. This has been done twice, and to-day the company, having no more than the same old plant to start with, has an authorized capital stock of \$2,500,000.

The attorney general of one State is now investigating a company which worked a scheme all its own, evidently quite profitably. It proposed to carry on a mail-order business limiting sales to its own stockholders. Accordingly it incorporated for \$750,000, offering stock for sale at \$25 a share, no one person to be permitted to buy more than four shares, or \$100 worth. How good business turned out to be is shown by the fact that while a "blue sky" permit was secured in one State to sell \$100,000 worth of stock, before the authorities could interfere \$400,000 worth of stock had been sold in that State.

IT WAS not long until the company increased its capital stock from \$750,000 to \$10,750,000, with one sweep of the pen, at one time. Notices were thereupon sent out to all the stockholders that every person who had bought one share would be permitted to buy thirteen more, those with two shares already could have twenty-six; those with three shares could get in for thirty-nine; those with four shares would be permitted to buy fifty-two. At the same time, the shares were raised in price from \$25 to \$35.

This simply meant that the man who had spent \$25 in order to get the trading privilege, and in the hopes of reaping some of the big returns promised, found himself obliged to increase his investment from \$25 to \$480 in order to have as proportionate a share in the company and its earnings as he had had before.

Another company, which has met with much success in the Middle West, was organized to launch a new automobile. Its promoter has admitted that the promotion expenses the first year were in excess of 50 per cent of the capital stock sold. That means that of every dollar invested, 50 cents or more went into somebody's pocket—his own mainly.

On the trial of an indicted motor-car company in the East, it was disclosed that one man, whose name was very prominently used, received \$7,000,000 worth of the company's shares "for plans, drawings, and designs," while "advisory directors" received blocks of stock as gifts. Included among these "advisory directors" were a former United States senator and a former governor. It is quite noticeable that in many of the States where stock company flotations are most successful and profitable former state officials are to be found vying with bankers on the directory board and as nominal officials. The value of a name is well known to the men who meet in the quietness of an office and form a company the stock of which they then offer to the general public—farmers mainly.

That this policy often works grave financial loss and serious injury to the trusting investors is only too apparent to those on the inside and to those who investigate. A case is known of a farm woman who had been confined in a state asylum for the insane for some time. Apparently cured, she was discharged, only to have occasional lapses of insanity, none serious enough, however, to warrant her being confined permanently. Her husband carried \$12,500 worth of life insurance. On his death the widow had hardly returned to her farm from the cemetery before she was visited by a stock salesman who succeeded in selling her \$10,000 worth of stock in companies which have not proved useful or necessary to this day. She had dissipated four fifths of her estate before there was any time for the appointment of a guardian for her, as was done shortly thereafter.

Another case is known where a couple of slick salesmen, glibly quoting big figures and famous men's fortunes until a farmer and his wife were absolutely confused, succeeded in prevailing upon the daughter

standing near-by to sign her father's name to two notes totaling \$5,000, arguing that the old folks were unable to see the big possibilities as she could see them.

Another case is on record, litigation having already been started, showing that some slick promoters went up north from the South and organized a new stock company to buy, for \$300,000, a company of their own, existing down South, which had not paid a cent of dividends for six years. They sold over a half-million dollars' worth of stock in the new Northern concern, pocketed the \$300,000 which they paid themselves for the old Southern concern, and no accounting is likely to be made unless the efforts of a half-dozen "investors" succeed in forcing the promoters to come into court and explain their transactions. It is hardly to be wondered at that the State Bankers' Association of this Northern State, at their last convention, should have strongly denounced the practice of the promoters and the bankers who make this practice possible and profitable, passing these ringing resolutions:

"We have within this State a swarm of private corporation promoters who are engaged in the business of starting new corporations for the sole purpose of securing promotion salaries, including exorbitant commissions paid to agents for the sale of stock; and as a means of reducing this evil we call upon the bankers of our State to refuse the inducements now so freely offered for their influence in making sales of stock in these concerns, most of which are unnecessary, if not unsound.

"We urge the bankers of our State to refuse to buy notes given for the purchase of such stock.

"We condemn the practice of any bank officer or employee receiving or accepting compensation, directly or indirectly, by reason of his connection with any promotion scheme.

"We further recommend that a law be passed altogether prohibiting the payment of any commission whatever to stock salesmen, promoters, bankers, or others.

"We especially urge bankers to refuse to write letters recommending not only the stock as an investment but also the men connected with the promotion of the enterprise."

The regrettable part is, however, that many a banker voted in favor of these resolutions who was guilty of the very thing they denounced. A member of the resolutions committee which drew them up, on his return home, was waited upon in no pleasant or hospitable manner by a stock promoter to whom he had himself "sold" a letter of endorsement; the promoter naturally wanted to know, once and for all, which side of the fence his banker friend proposed to occupy. At last reports he was still a-straddle.

THE Treasury Department of the United States has issued repeated warnings against the exchange of Liberty bonds for these stocks, but the warning has heretofore fallen on unheeding ears. The allotment of 20 or 25 per cent annual returns (hardly ever do the promises fall below this) have proved too strong.

Moreover, as a rule, the promoter asks only for one fourth of the stock subscription in cash—being his share of the full amount—taking notes for the balance, and usually holding out the further inducement that the stock dividends will be so large the company will never call for the remaining three fourths of the stockholder's investment, but will return the notes uncashed. They have a habit of showing up at the bank for collection at maturity, however. Long before that time the promoter has passed on to other companies and other fields.

Louis B. Franklin, director of Liberty Loan organizations for the Treasury, is authority for the statement that between 80 and 90 per cent of fraudulent securities are now being marketed by giving stocks in exchange for Liberty bonds, which are sold by the promoters. The further statement is made by Richard Morse, representing the Investment Bankers' Association, that between \$250,000,000 and \$500,000,000 of fraudulent securities, not passed on by the Capital Issue Committee and not recognized by organized investment bankers, have been marketed in the United States within the last year.

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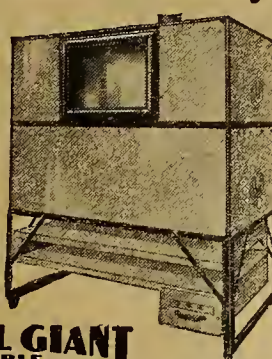
SPECIAL FEATURES

The book shows you how to keep crop costs by lots; labor charges against crop; crop rotation records. Contains also a table to keep accurate record of your breeding dates, etc. Also a Workman's Time Sheet and Wage Table—saves a world of bother. Also pages for inventory; table of standard weights of all farm products. Also directions as to how to measure land; corn on cob in crib; hay in different style stacks, etc., etc.

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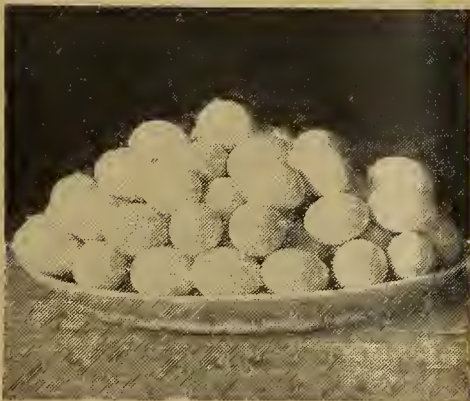
NOTICE

Get the original National Giant Portable Smoke House. Beware of Imitations or Experiments.

Poultry Windbreaks

By R. G. Kirby

LAST spring a severe windstorm picked up one of our 8x19 colony houses in an exposed position and turned it over, while smaller houses in a nearby orchard were not moved. It proved to me the value of plantings for protecting small poultry buildings. Evergreens form one of the best windbreaks on the poultry farm at all seasons. I find the farm flock which can range in an area protected from the wind will be out scratching when the birds with an unprotected range must remain in the house. Frequently on bright days the wind will be severe. Hens can stand the cold,



Five dozen eggs, unsorted, from the laying house, as like in shape, color, and size as peas in a pod. Such uniformity is not just luck. Selection and breeding turned the trick, and it pays

but they cannot forage in a strong wind. When the feathers remain close to the body the bird can keep warm, but when the cold wind can penetrate the fluff the bird is soon chilled.

Fruit trees are some protection to poultry houses even in winter, and furnish shade during the summer as well as some profit from the fruit. However, in the winter the evergreen hedge makes the most satisfactory windbreak. When a colony house in a field is turned wrong side up and a brood coop in an orchard is not moved, it shows the advantage of wind protection on a poultry farm.

Ducks and Gardens

By W. B. Collins

I TRIED out a labor-saving practice in my garden by taking advantage of ducks as an aid to weed-killing and insect-destroying. I divided the garden into two parts—one in which to pasture the ducks, the other to be duckless.

In the duck garden, which is enclosed with poultry netting, garden crops were



"Not supper-time yet, duckies"

grown which were not easily injured by ducklings—such crops as sugar corn, potatoes, tomatoes, squash, cucumbers, rhubarb, and cane and bush fruits. The ducklings devoured innumerable harmful insects and were of material help clearing the garden of multitudes of tender sprouting weeds. Of course, if the garden is very small, but few ducks could be safely confined in the enclosure. Even though ducks do not scratch, the continual tramping of many webbed feet over a small area would injure small and delicate plants.



ARE YOU FEEDING WORMS?

Feeding wormy animals is wasting food. They eat more but they do not thrive.

Every farmer wants to be up to the limit of production now while the hungry world is calling for food. Make every pound of feed you feed do its whole duty.

Drive out the worms and condition your stock for growth, for milk, for work—for beef, mutton and pork, by feeding Dr. Hess Stock Tonic

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Eliminate Waste and Increase Production

Over three million farmers in the United States and Canada are feeding Dr. Hess Stock Tonic regularly

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it means healthy, thrifty animals free from worms. It contains Tonics to improve the appetite, Laxatives for the bowels, Vermifuges to expel worms, Aids for digestion, Ingredients which have a favorable action on the liver and kidneys.

The dealer in your town will sell you Dr. Hess Stock Tonic according to your needs and refund your money if it does not do what is claimed. Buy 2 lbs. for each average hog, 5 lbs. for each horse, cow or steer, to start with. Feed as directed and see how your animals thrive

Why pay the peddler twice my price?

25-lb. Pail, \$2.25

100-lb. Drum, \$7.50

Except in the far West, South and Canada
Smaller packages in proportion

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STANDARD REMEDY HEAVE, COUGH, DISTEMPER AND INDIGESTION COMPOUND cures Heaves by correcting the cause—Indigestion. Prevents Colic, Staggers, etc. Best Conditioner and Worm Expeller. 26 years' sale. Three large cans guaranteed to cure Heaves or money refunded. The 1st or 2nd can cures. \$6.00 and \$11.00 per can at dealers' or prepaid by parcel post. Booklet free.

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Approximately 10,000 cases are successfully treated each year with Fleming's Fistoform. No experience necessary; easy and simple; just a little attention every fifth day. Price \$2.50 a bottle your money refunded if it fails. Send for free copy of FLEMING'S VEST-POCKET VETERINARY ADVISOR. Valuable for its information upon diseases of horses and cattle. 197 pages, 67 illustrations. Write today.

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Sloan's Liniment Kills Pain

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For any Size—Direct from Factory

You can now get one of these splendid money-making, labor-saving machines on a plan whereby it will earn its own cost and more before you pay. You won't feel the cost at all.

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No. 2 Junior—a light running, easy cleaning, close skimming, durable, fully guaranteed separator. Skims 120 quarts per hour. We also make four other sizes up to our big 800 lb. capacity machine shown here—all sold at similar low prices and on our liberal terms of only \$2 down and a year to pay.

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30 DAYS' FREE TRIAL GUARANTEED A LIFETIME

Against defects in material and workmanship. You can have 30 days' FREE trial and see for yourself how easily one of these splendid machines will earn its own cost and more before you pay. Try it alongside of any separator you wish. Keep it if pleased. If not you can return it at our expense and we will refund your \$2 deposit and pay the freight charges both ways. You won't be out one penny. You take no risk. Postal brings Free Catalog Folder and direct from factory offer. Buy from the manufacturers and save money. Write TODAY.

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Over 125,000 new Butterly Separator Now in Use.

I Want You to Make \$500 or More Extra This Year

YOU can do it. I'll help you. Mr. Thos. Ashley, Kimball, S. D., says that from his Old Trusty he sold \$350 worth of eggs, \$200 worth of pullets, \$200 worth of roosters, has 50 hens left and does not count what family used.

H. F. McDonald, of Manchester, Iowa, using one Old Trusty, says, "My poultry sales for 10 months are \$1084.00." Poultry raisers are making money this year. Send me your name and

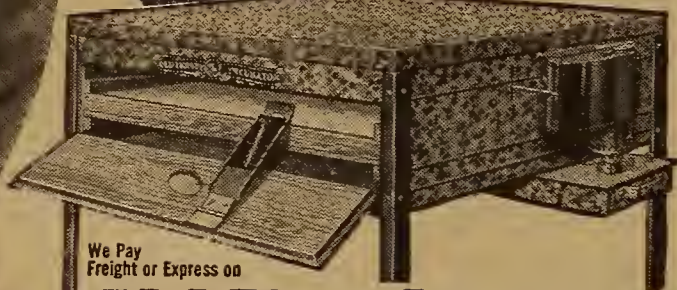
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10 Year Guarantee
Don't take chances. Find out what an incubator is made of before buying. Catalog and sample of material used sent free. We will send you these two machines, right prepaid East of Rock-
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Both Machines \$14
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Wisconsin are made of genuine California redwood. Incubators have double walls, air space between, double glass doors, copper tanks, self-regulating. Shipped complete with thermometers, egg tester, lamps, etc., ready to run. Send today for our new 1919 catalog, free and postpaid.

Large Size 180 EGG INCUBATOR AND BROODER, BOTH \$17.25.

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Box 48 Racine, Wis.

MONEY BACK IF NOT SATISFIED

EGGS A DAY FROM 23 HENS, IN WINTER

Duni's Hens Hadn't Laid All Winter, Until He Tried This Plan

We have 23 chickens and hadn't had an egg all winter. In five days after feeding Don Sung, we got five eggs a day; in three weeks, we were getting 12 eggs a day; in five weeks we got 15 to 19 eggs a day. —John Duni, Box 102, Cherry Valley, Pa.

Duni started giving his hens Don Sung last winter, in zero weather. He now keeps his hens in cold weather, when hens usually stop laying. It costs nothing. Here's our offer:

Feed your hens Don Sung and watch results for one month. If you don't find that Don Sung pays for itself and pays you a good profit besides, simply tell us and your money will be refunded.

Don Sung (Chinese for egg-laying) works directly on egg-laying organs, and is also a splendid tonic. It is given in the feed, improves the hen's health, makes her stronger and more active in any weather, starts her laying.

Feed Don Sung for 30 days and if it doesn't get you eggs, no matter how cold or wet the weather, your money will be refunded by return mail. Send 50 cents for a package by mail prepaid. Burrell-Dugger Co., Columbia Bldg., Indianapolis, Ind.



Farm Women! Your Chance to Serve

Help Uncle Sam by raising more poultry. Eggs and poultry release "red meats" to feed the fighters. For best results, equip your machines with Tycos Incubator and Tycos Brooder Thermometers. They are accurate and easy to read.

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Ask your dealer. If he cannot or will not supply you, remit direct to us. Send for booklet. Taylor Instrument Companies 134 Ames St., Rochester, N.Y.

Pests, Seen and Unseen

By George D. Horton

AS I go from one poultry farm to another in my poultry investigative work, I find that external poultry parasites and pests come in for constant attention, but the enemies of our poultry flocks which are hidden in the digestive and intestinal tracts as a rule are but little considered. Nevertheless, these internal pests are a constant menace to the thrift and productivity of our birds. Worm infested fowls cannot be prolific layers, and the internal parasites continue to spread from bird to bird.

If it were more generally known that there is a weed growing in practically every section of our country which is an excellent worm remedy for poultry, it would help much to overcome the common worm troubles in poultry flocks. This plant is called the Jerusalem oak, or American wormseed, which is easily recognized by its thin, narrow-serrated leaves and peculiar odor.

The treatment that I find to be successful is to break the leaves and stems of the plant into small pieces, then placing them in a tightly closed glass jar and covering them with gasoline. After standing three days the medicated gasoline is used as a stock supply. Treatment is to give each fowl suspected of having worms one teaspoonful of the medicated gasoline in a moist mash fed in the morning when the birds are hungry. If the mash containing the medicine is not readily eaten, reduce the feed for one day, then distribute the mash so that the fowls will get an equal quantity.

The following morning give each adult bird one-third teaspoonful of Epsom salts dissolved in hot water and mixed with a small quantity of mash.

As a worm preventive the Jerusalem oak can be fed effectively as green food to poultry kept in confinement, as it is readily eaten and relished by yarded fowls.

If in doubt about the identity of the plant, get your druggist to help you.

But while I am on this subject of poultry hindrances, let me briefly give the experience of a thoroughgoing poultry-keeping friend of mine who early in 1916 bought a new place with which to enlarge his operations. Here is his account of his winning fight against external poultry pests which he had to face on his new farm:

"Poultry with us has always been a source of nice side-line profit. But after buying our new farm, the first season's poultry operations hardly broke even, practically half of our choice young stock being destroyed by pests—rats, cats, weasels, crows, hawks, owls, and foxes.

"In the fall we began a systematic campaign to safeguard our poultry by relaying concrete floors in every permanent building in which poultry was to be kept. Likewise, the sidewalls were protected by small-mesh wire screen. Also pest-proof screened



This plant (American wormseed) makes short work of poultry parasites

yards and runs were supplied for young stock until beyond the age of greatest danger. In connection with fencing out the pests, we have made use of poison, traps, and shotguns, and have also destroyed every breeding place possible, such as junk and lumber piles, so that there were no places in which the pests could hide. Result: Our losses this season are not worth considering, and the poultry saved will pay twice over the cost of improvements made.

"Since coming to our new farm I have hit on a new dust-bath aid for winter use—dust from the oiled road adjoining our place. It does not dry out nearly as much as ordinary dust. Hens never seem to mind a dust-laden atmosphere, but the

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ONLY 9,000 X-RAYS This Year Output Limited To Half Order Quick or You Will Be Too Late.

If you want the incubator that will give you the very most in satisfaction—the biggest hatch of healthy, vigorous chicks at the lowest cost and with the least trouble and labor—USE AN X-RAY. It's the MODERN, UP-TO-DATE HATCHING MACHINE—with more improvements and refinements than you'll find on any other machine. 20 BIG EXCLUSIVE FEATURES—EVERY ONE OF PRACTICAL, PROVEN VALUE. The X-Ray pays for itself in better hatches and in economy of operation. We maintain a Service Department to solve all poultry problems for our friends.

20 Big Features of the World's Superior Incubator

Twenty wonderful improvements—found on no other machines. Before buying any incubator find out about the X-Ray Radiator Heater, X-Ray Vapor Generator, X-Ray Gas Arrestor, X-Ray "One Fill During Hatch" Oil Tank, X-Ray Automatic Regulator, X-Ray Hinged Glass Top, and all the other improvements.

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Handsomely Illustrated in color. Full line of X-Ray Incubators & Brooders. X-RAY INCUBATOR CO., Des Moines Iowa

Be One of the Lucky 9,000. ACT!

Big Oil Capacity One Fill During Hatch

Get More Eggs On Less Feed

Egg prices this winter will undoubtedly be the highest in the world's history. Those who know how to feed to get winter eggs will reap enormous profits, while improper methods mean a loss.

Prof. T. E. Quisenberry, one of the world's greatest poultry authorities and President of the American Poultry School, Box 922, Leavenworth, Kansas, has issued a 16-page bulletin on "How and What to Feed For Heavy Egg Production and to Cut the Cost of Feed." This Bulletin will be mailed Free to interested readers, while they last. Hundreds of hens fed and cared for under Prof. Quisenberry's direction have laid 200 to 298 eggs per year, while the normal production according to U. S. Government reports is 60 to 80 eggs per year. Write today for your copy of this valuable Bulletin.

64 BREEDS Most Profitable chickens, keys, Choice, pure-bred, hardy northern raised. Fowls, eggs, incubators at low prices. America's greatest poultry farm. 26 years in business. Valuable new 112-page Poultry Guide and Catalog free. Write today.
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\$10.95 buys 140-Egg Champion Belle City Incubator

Prize Winning Model — Double Fibre Board Case, Hot-Water, Copper Tank, Nursery, Self-Regulated Safety Lamp, Thermometer Holder, Egg Tester. With \$6.35 Hot-Water, Double Walled 140-Chick Brooder—both only \$15.95

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East of Rockies—allowed towards Express and to points beyond. I ship quick from Buffalo, Minneapolis, Kansas City or Racine.

Used by Uncle Sam and Agri'l Colleges. With this Guaranteed Hatching Outfit and my Guide Book for setting up and operating you can make a big income.—And my

Special Offers

provide ways for you to make extra money. Save time—Order now, or write today for my Free Catalog, "Hatching Facts"—It tells all. Jim Rohan, Pres.

Belle City Incubator Co., Box 100, Racine, Wis.



poultry keeper does. The oiled dust, moreover, is obnoxious to lice, and is a worthwhile ally in combating them. Crude oil is a dust preventive applied in summer to many thousands of miles of main roads, and poultry keepers should give dust from these oiled roads a trial. Of course, the same result can be secured by moistening unoiled road dust or garden soil with a little crude oil.

Speeding Up the Bee

By B. H. Smith

BEES have a name for being busy; but L. E. Mercer's bees weren't busy enough to suit him, so this bee man of southern California hit on a plan to help them to more shining hours to improve. The plan, backed by a big motor truck,



He makes the bees live up to their reputation

worked so well that last season he added 15 tons of honey to his average yield—a \$3,600 extra profit.

Mr. Mercer's apiary is in a canyon, famed for its wild sage, northwest of Los Angeles. Wild sage makes fine honey, but it doesn't bloom until midsummer, and so the springtime hours were wasted—until one March midnight when Mr. Mercer, while the bees were fast asleep, slipped them on board the truck. When they awoke they were 70 miles away, in the foothills where the orange groves were in full bloom.

The bees stored orange-blossom honey until wild sage time, and then one morning they awoke back at their home workshop. Then, when the wild sage quit blooming, they had a trip to the bean fields of Ventura County. In all, they put in over two months' extra labor.

Bees have been moved before to lengthen their season, but going by wagon or freight train always means the breaking of comb and the loss of bees, and now and then a lot of trouble when a few excited bees would land on a horse. Motoring along on a good road, the bees arrive before they have time to get mad about it, and then they get right up and go to work, and never think of striking for overtime.

Sea Food Saves Meat

By A. H. Pulver

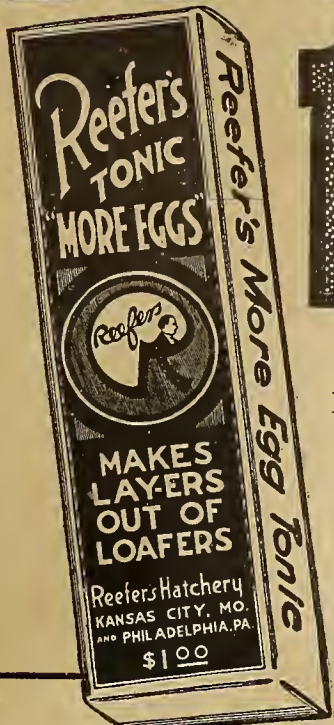
THE present extreme demands being made on our food supplies is causing critical attention to be directed to every possible new source of supply. In New York the State Conservation Commission has in recent years placed millions of "fingerlings" in the "pocket" waters of Lake Ontario. The result is that the State is making fish farms along the margins of the lake. "Greenbacks" are the principal fish stocked in Lake Ontario proper, though the commission through the state hatchery is restocking the inland lakes and smaller streams of New York with trout, bass, and other game fish.

During the netting season for greenbacks the fish are taken by the ton. So great is the catch at times that the boats have to put back to land and unload before finishing the net run. These fish are sold at the docks for a modest price. Generally they are bought in quantity and salted for winter use. Each fall the state hatchery men set nets from which the female fish are taken for their eggs.

The method of hatching is different from that used with trout. From one quart of eggs the average hatch is 100,000. These are put in glass jars, two feet deep and eight inches in diameter. A rubber tube admits water to the bottom of the jar and the eggs are constantly stirred by its force.

As the fry hatch they rise to the surface and are carried out through a small spillway into a large tank painted black in order that the little white fish may be more easily seen.

160 Hens 1500 Eggs



As America's foremost poultry expert I predict that eggs are going to retail for a dollar a dozen this winter. Right now the retail price is from 50c to 75c per dozen in some of the large cities. At a dollar a dozen poultry raisers are going to make tremendous egg profits. You, too, can make sure of a big egg yield by feeding your hens a few cents' worth of "More Eggs" tonic.

This product has been tried, tested and proven. It is acknowledged the best and most successful egg producer on the market today. Every day that you don't use it means that you are losing money. Don't delay. Start with a few cents' worth of "More Eggs" tonic now.

Got 117 Eggs Instead of 3

That's the experience of one poultry raiser who wrote me. A. P. Woodard of St. Cloud, Fla., writes: "I get from 40 to 50 eggs a day now. Before using 'More Eggs' I was getting only 8 or 9 eggs a day." Here are the experiences of a few others of the hundreds who write me:

"160 Hens—125 Dozen Eggs"

E. J. Reefer: Waverly, Mo. I have fed two boxes of More Eggs Tonic to my hens and I think my hens have broken the record for eggs. I have 160 White Leghorns and from March 25 to April 15 I sold 125 dozen eggs. MRS. H. M. PATTON.

"15 Hens—310 Eggs"

E. J. Reefer: Turner Falls, Mass. I used your More Eggs Tonic and from December 1 to February 1, from 15 hens, I got 310 eggs. Your remedies are just what you claim them to be. MRS. C. R. STOUTON.

"Laid all Winter"

Dear Mr. Reefer: Lackawanna, N. Y. I gave the tablets to my hens and in three weeks they began laying and laid all winter. I never saw anything like them in the world. Yours truly, MRS. ALBERT SMITH, Penna. R. R. Ore Docks.

"37 Eggs a Day"

E. J. Reefer: Elwood, Indiana. That More Eggs Tonic is simply grand. When I started using it they did not lay at all, now I get 37 eggs a day. Yours truly, EDGAR E. J. LINNIGER.

"Increase from 2 to 45 Eggs a Day"

Reefer's Hatchery: Derby, Iowa. Since I began the use of your More Eggs Tonic 2 weeks ago I am getting 45 eggs a day, and before I was only getting 2 or 3 a day. Yours truly, DORA PHILLIPS.

"Doubles Egg Production"

E. J. Reefer: Paradise, Texas. I have been using More Eggs Tonic 3 or 4 weeks and must say it is fine. My egg production has been doubled. J. C. KOENINGER.

"48 Dozen in One Week"

Dear Mr. Reefer: Woodbury, Tenn. I can't express how much I have been benefited by answering your ads. I've got more eggs than I ever did. I sold 42 1/2 dozen eggs last week, set 4 dozen, ate some and had 1 1/2 dozen left. From your friend, MRS. LENA McBRON.

"Increase From 8 to 36 Eggs a Day"

E. J. Reefer: Shady Bond, Kansas. I am well pleased with your More Eggs Tonic. I was only getting 8 or 9 eggs, now I am getting 3 dozen a day. Yours truly, WM. SCHMIDT.

More Eggs Makes Layers Out of Loafers

This is a concentrated tonic, not a food. It consists of every element that goes toward the making of more eggs. A perfect regulator, aids digestion, stimulates egg production and builds firm bones and strong muscles. The foremost authorities in America and poultry raisers from every state endorse Reefer's "More Eggs" Tonic.

Results Guaranteed!

Here is the facsimile of the guarantee of a million dollar bank—that "More Eggs" will produce results. This million dollar bank guarantees to refund your money if you are not satisfied. You run no risk. So don't delay. Every day you wait you are losing money.

Order Today

Send a dollar today for a full-sized package of "More Eggs" tonic; or better yet send \$2.25 at extra special discount, and get three packages. Three packages is a full season's supply. Don't put it off. Order now and start your hens making money for you. Remember, you run no risk. A Million Dollar Bank will refund instantly if you are not entirely satisfied. If you don't order your More Eggs now at least mark on the coupon for Mr. Reefer to send you, ABSOLUTELY FREE, his valuable poultry book that tells the experience of a man who himself has made a fortune and is helping others to make money out of the poultry business. Act NOW. Don't wait. Pin a dollar bill to the coupon. Or send \$2.25 which will guarantee your winter's egg supply. Send for this bank-guaranteed egg producer NOW. Today! It has helped thousands of others and will help you, too.

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Kansas City, Mo.

TO WHOM IT MAY CONCERN:

I hereby guarantee that Mr. Reefer will carry out his agreement *** and this bank further agrees to return to the customer the total amount of his remittance, if Mr. Reefer fails to do as he agrees.

Very truly yours, *W. H. H. H.*

President.

E. J. Reefer, 6071 Reefer Bldg. Kansas City, Missouri

Enclosed find \$..... Send special discount price, with all charge prepaid, packages of More Eggs Tonic. Send this with an absolute Bank Guarantee that you will refund all money if this tonic is not satisfactory to me in every way.

Name

Address

IMPORTANT: If you don't want to try this Bank Guaranteed tonic at least mail the coupon for my Free valuable poultry books FREE

Poultry Book Latest and best yet: 144 pages, 215 beautiful pictures, hatching, rearing, feeding and disease information. Describes busy Poultry Farm banding 53 pure-bred varieties and BABY CHICKS. Tells how to choose fowls, eggs, incubators, sprouters. Mailed for 10 cents. Berry's Poultry Farm, Box 39, Clarinda, Iowa

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All 10% Guarantee Paid
Think of it! You can now get this famous Iron Covered Incubator and California Redwood Brooder on 30 days trial, with a ten-year guarantee, freight paid east of the Rockies.
150 EGG INCUBATOR CHICK BROODER
Incubator is covered with galvanized iron, triple walls, copper tanks, nursery, egg tester. Set up ready to run. Brooder is roomy and well made. Order direct from \$10 advertisement—money back if not satisfied or send for free catalog.
IRONCLAD INCUBATOR CO. Box 51, RACINE, WIS.
Made of Redwood cov'd with Galv. Iron (3)

POULTRY AND PIGEONS FOR PROFIT
Foy's big book tells all about it. Contains many colored plates—an encyclopedia of poultry information, poultry houses, feeding for eggs, etc. Written by a man who knows. Sent for 5 cents. Low prices, fowls and eggs. FRANK FOY, Box 4, CLINTON, IOWA

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Help feed the world and make more money for yourself with time-tested
SUCCESSFUL Incubators and Brooders
26 years' experience. Cabinet-made—scientifically ventilated. Hot water heating plant. Write for Free Catalog—ask about poultry and eggs, and "Successful" Grain Sprouters. Famous booklet, "Proper Care and Feeding of Chicks, Ducks and Turkeys," 10 cents.
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62 BREEDS Most Profitable Pure-Bred Chickens, Geese, Ducks, Turkeys. Hardy fowls, eggs, and Incubators at lowest prices. America's Pioneer Poultry. Write for valuable Poultry Book FREE. F. A. NEUBERT, Box 314, Mankato, Minn.

SOFT-HEAT Hatch Strong Chick
Greatest Incubator discovery in 50 years insures your strong and healthy chicks from all good eggs. Result of 25 years experience, and scientific study.
Porter Soft-Heat Tubeless Incubator
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Money from Side Lines

By Donald Morton

GIVEN a little plot of ground, either in the city or in the country, what profitable side lines can be had to add to the income? Herewith will be found the experiences of a half-dozen landowners, young and old, no one of the plans being copyrighted.

A sixteen-year-old boy living at Oshkosh, Wisconsin, breeds guinea pigs for the University laboratory, selling his unsuspecting subjects for 50 cents a head. He makes good money and has the pleasure of realizing that he is helping his parents pay for the home place by his efforts.

A Georgia girl, a member of the girls' tomato club of her section, whose story the United States Department of Agriculture vouches for, made one of the most serious pests of the tomato crop pay all the expenses of her season's work. She lives near one of the Southern rivers where there is good fishing, and one day a couple of fishermen came to her and offered her a cent each for all the tomato worms she would bring them for bait. She had been catching the worms and killing them anyway, so in the course of a week she gathered and sold 500. She kept on catching and selling the worms the remainder of the season, and when her supply was scanty she worked in the patches of her neighbors, and was not only paid for her labor by them, but also for her worms by fishermen.

A Kansas City woman makes good money by raising pheasants for the various States whose authorities wish to buy the game birds for their depleted preserves.

that there is more money in raising frogs than in digging gold. He secures the necessary food supply in a novel manner, hanging thick cloths soaked in molasses around the edge of his ponds, the molasses catching and holding the flies, which the frogs eat and thrive upon, with good profit eventually in their succulent hind legs.

Selecting and sorting rye straws for soda sippers is the manner in which a young grain-belt girl makes easy and good pin-money. She selects straws of uniform diameter, free from all blemishes, and ties them up, in even lengths, in neat bundles of 100 each, selling them through a St. Louis wholesale drug house which supplies them to soda fountains through the Middle West generally. The girl is paid \$1.50 a thousand, and finds a ready market for most of her product, because the competition is little and her work is good.

Perhaps the Kansan who has turned the jack rabbit to profit deserves the gold medal, however, for he is ridding the country of a pest and making a good living on the side. He has caught more than 100,000 jack rabbits already, and sold most of them at an average price of \$2 each delivered. Finding a place where jack rabbits are plentiful, a fence of netting is stretched around 160 acres of land, with wings extending at intervals at right angles, the wings ending in a pocket. A skillful horseman can easily succeed in driving a jack rabbit into one of these wings and eventually into one of the pockets, where he is crated and ready for shipment.



Speaking of potatoes, the four loads pictured, grown by A. A. Neale in 1916, aggregated 41,092 pounds when delivered to his loading station, Montrose, Colorado, for which his check was \$1,027.30. His entire crop of 40 acres averaged \$596.35 an acre.

On a few acres in the suburbs she already has 500 adults and 5,000 baby pheasants, for which there is a ready and steady market.

Equally interesting is the case of an Oklahoma woman who, following the harvesting of a mammoth crop of cantaloupes, vesting six bushels of seed from her melon patch to one of the largest seed houses in the country, receiving a good price therefor. She removed the seeds and dried them, feeding the melons to her hogs, thus netting a tidy sum from what otherwise would have been a loss. Her hogs later topped the market.

A number of Missouri farmers find it profitable to haul wagon loads of cobs to town for shipment to the cob-pipe factories, which provide a profitable industry and make the "Missouri Meerschaum" a classic. According to the State Labor Bureau, 150,000 bushels of cobs are used in the manufacture of pipes in a year.

A young city man, a bookkeeper, living on a suburban tract of three acres near Des Moines, has discovered good profit in a few colonies of bees, even going so far as to keep them on the roof of his house before he was able to buy the suburban tract which is now his home. Last year, working before and after store hours, he sold \$1,362 worth of honey, giving him an income from his bees greater than that made by keeping books all day long in a local clothing store.

A California truck gardener has found

Given a little plot of ground, no matter where, the ambitious and quick-witted man or woman, boy or girl, can make good returns if they will only use their gray matter and hit upon something that not too many other people are already doing.

For Better Markets

By John Coleman

RURAL communities organized for collective marketing enable the small producer to obtain good prices through selling products of high quality. The quality of farm products governs the price to be obtained, and the efficiency of production determines the margin between cost of production and the selling price.

In producing farm products the farmer is confronted with the difficulties of supplying a sufficient volume of goods of high quality to market them individually with profit. For example, a farmer with a small portion of a carload of good wheat can hardly pay the minimum charges on a car to send his wheat to market without losing the profit on the superior quality.

If, on the other hand, there were 100 farmers producing a uniformly high grade of wheat and owning their elevator, it would be possible for them to secure cars and fill them to the maximum, thus sending their wheat to market at a minimum cost for transportation.

Does Your Child Get His Rights?

By Helen Johnson Keyes

THIS Age of the Child is making people think. Wise men and women are studying him, writing books about him, making laws for his protection. The world is determined that children, the men and women of the near future, shall be given their rights.

By this, however, is not meant a training which will allow them to do as they please—to run wild. Such an education would not ensure their rights, but destroy them. Their rights are not acts of license, but a thorough training for life.

Of course, at all times good parents have sought to prepare their boys and girls for usefulness in the world; but there is a decided difference in the way we do it and the way it used to be done. This difference, I believe, is a good one. It lies in the fact that we try to create favorable conditions in which a child may grow naturally, whereas, of old, people did not think much about conditions, but attempted to shape and mold the child himself by constant instruction, punishment, and rewards.

Our idea now is to make the soil—that is, the home life—as rich and fertile as possible for our youngsters. Like the farmer who, when he has cultivated, watered, and drained his garden, feels confident of a good crop, so we, when we have made somewhat it should be, feel pretty sure that the characters which we have planted will grow into sturdy men and women.

If, however, we are careless of the home garden and let our children grow up in shallow or unsympathetic surroundings, not all the teaching, preaching, and punishing in the world will make them strong and fine, any more than water and sunshine given to ripe vegetables after they lie in the pan ready for cooking will make them large and of a delicious flavor if they have been grown in uncultivated soil.

By children's rights, then, we mean a thorough training for life, and they must receive this training in good homes—homes which are good for them.

What does the home which is good for children have?

It has a spirit of partnership, for this gives children the training in helpfulness and in the power to co-operate which is their right.

All children older than three or four years can perform certain daily tasks of real usefulness. Mothers should study the powers of their children and give them to do that of which they are capable.

It is at this tender age that little people are most anxious to help, but because their efforts are slow and blundering it is natural to check them and perform the labor one's self. Then they grow up with the habit of not doing, and when they are older we blame them for selfishness.

There ought to be a family council in which are discussed the best color for the new barn and the best fencing for the fields. The children must express their views and be shown the reasons which guide their elders. Thus they will feel that the home is theirs and worth making sacrifices for.

The home which is good for children allows the young people to own and develop property, for so are cultivated a sense of responsibility, a perception of the manner in which we reap what we sow, and a respect for contracts.

Give them a garden plot, or a calf, or a pig, or some poultry; let them have the

care of these and the profits from them, minus rent for the land or the price of feed which you have supplied.

Make your agreement before they engage in the work, and then be true to it. If you take from them the crops, or the milk, or the eggs which they have produced, without paying them, you perform an act of injustice which will teach them dishonesty and lead them to conclude in their hearts that "might is right" in this life. You will deprive them of the training in honesty which is their due.

The home which is good for children gives them rooms of their own, as far as is possible. When children do not know from night to night in what room they are to sleep, when they keep their things in "any old place," sharing closets and drawers helter-skelter with other members of the family, they miss their rights—the right to a training in neatness and refinement which it is our duty to give them.

You do not need to do much furnishing. If

you give the girls an empty room, liberty to take what they like from the attic, a few dollars and some free time, they will create a cozy place of it. And this cozy place may make the girl of disorderly habits neat, and the girl of irritable temper sunny and good humored. It is at least worth a trial.

A decent mirror and good washing arrangements will make a sudden difference in your boy's manners; and good manners are the right of every child, for without them nobody accomplishes great things in the world.

The home which is good for children must have a welcome for the boys and girls of neighbors.

There are certain lessons which our young people need to learn in order to be successful in life which they can learn only from other boys and girls. They must measure their strength against that of playmates of their own ages, in order to learn self-control. They must understand what the consequences of acts are when these consequences are not produced by the superior authority of grown-ups, but by the judgment of equals.

The home which is good for children insists on lots of rest, sleep, play, and fresh air. Every parent ought to read a few simple books which tell how much may fairly be expected of children at different ages. I am afraid the tendency on the farm is to work them too hard, just as the tendency in the cities is to give them too little responsibility.

It is a terrible thing to send little boys out to plow; it is cruel to fill the early mornings so full of chores that the boys and girls go off to school tired. Parents must learn how much sleep, play, and food is necessary at different stages of growth.

It will avail nothing to extend the acres of the farm, to free its mortgages, and put up fine buildings, if the best crop of the farm—the children—lose their souls.

We love what is lovable, what is jolly and just and kind. If we do not make our homes jolly and just and kind, we need not expect our children to love them or remain in them when they arrive at the age of independence.

NOTE: Upon request and receipt of a self-addressed stamped envelope, sent to Mrs. Keyes in care of FARM AND FIRESIDE, 381 Fourth Avenue, New York City, a list of books written to help mothers in bringing up their boys and girls will be mailed to you.



Here's a youngster who has his own vegetable patch. He gladly pays rent for the land he uses, and whatever he makes is his



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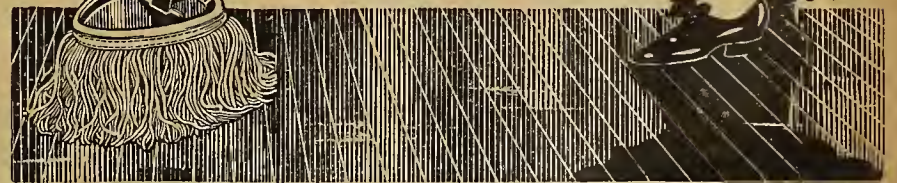
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Should Farm Children Stay at Home?

Does ease and modest success in the city compare with work and success on the old home place? This mother says no

As told to Mary Quint Walker

A BIG magazine recently asked one mother and father in various walks of life if they would choose for their children the business they had spent their lives in. The list was made up of bankers, lawyers, farmers, doctors, detectives, engineers, politicians, manufacturers, and others. Almost without exception they answered no, and went on to enumerate the disadvantages of their particular business.

The truth is that we are too close to the details of the business we are in to know whether it is desirable or not. It isn't so much your actual occupation as the attitude in which you approach it that counts. There is big success in almost any business for the person who goes at it in a big way, and likes it. THE EDITOR.

I SUPPOSE there are many mothers, like myself, who wish that they could retrace their steps. When we begin to grow old we see and regret our foolish mistakes.

I was a farmer's daughter, and I am a farmer's wife. My father believed in getting up in the summertime at three o'clock, and in the winter at four. Every other member of the family had to do the same, and he provided plenty of work to fill the long hours, too. How I hated the farm! and in the morning, when I went shivering to the back pasture after the cows, I vowed that I would not do such work all of my life. I usually milked out in the pasture, and I would warm my bare feet by sitting down on the place made warm by the cows. In those days cattle were not given the care that they receive to-day, and they sometimes remained out at night until nearly winter.

As I milked I built air castles. In the future I was to be a "city lady" and have no work to do. No longer would I have to plant and dig potatoes, work in the hayfields, help with the harvest, feed pigs, and milk cows. I, too, would have pretty dresses and soft, white hands. On the rare occasions that I went to town I gazed with admiration at the girls who did not look countrified. Years ago it was an easy matter to pick out a farmer's wife or daughter.

But, after all, my dreams did not come true, for I loved and married Jim. He was a kind, indulgent husband and a different type of farmer than my father, so I began to be more satisfied, and almost forgot my former yearnings. When the children came, however, the yearnings returned. I would say that the farm was good enough for us—all we knew was farming, anyway—but the children must have a broader life. Our boy, Robert, must take his place in the big outside world, and be honored and respected as I did not believe that people ever respected and honored a man who tilled the soil. He should have his chance—be given a good education and be helped along the road that would lead him to a place where he would be inferior to none.

Thus my thoughts ran while Robert was a tiny baby in the cradle, and when my daughters were born I planned for them in the same way. Polly and Bessie should not be worn-out drudges, I told Jim, adding that I intended my girls should get more out of life than I had.

Jim laughed in his quiet way, and said that the farm wasn't such a bad place—one was sure of a square meal, anyway. This always made me angry, and I would reply that I supposed he thought that food and shelter were all that were needed, and I would be more determined than ever that the children should have their chance. When the girls were but wee tots of two and three, I made up my mind that they should never marry farmers. It sounds silly when I write it, but it is not strange that I had such thoughts, for thirty-five years ago a farm

met and talked with other neighbors. On Sunday we usually stayed at home, for the horses needed a day of rest.

When the children were old enough to go to school, I insisted that they go to town, though we had a very good district school. I intended to start them right, and if they were to make something of themselves a good education was absolutely necessary. So I convinced my husband when he objected to their going to town while they were so young. Jim hated an argument, and rather than have a "fuss," as he called it, he let me have my own way.

My sister, Anna, and her husband owned the farm next to ours. Like us, they had a family consisting of a boy and two girls. Anna's ideas, though, were totally unlike mine, and many a dispute did we have as we discussed the future of our youngsters. I could not understand her point of view and she could not understand mine, and when I accused her of indifference she replied by saying that she was as anxious for their success in life as I was for mine, but she did not believe in making children look with scorn upon their own home.

"Neither do I," I retorted angrily, "but I am not ashamed to say that I do hope my boy will be something higher than a mere clod, and I would rather have my girls die while they are little than to think they would be slaves as you and I and all the rest of the women out here are. I want them to know something, and amount to something too."

I can see my sister now as she answered me, her brown eyes flashing. "I want my children to know something just as much as you do," she said, "but I do not see why knowledge cannot be used on a farm. Country life has disadvantages, but so has everything else. The time is coming when the farmer will be regarded just the same as any business man—if he runs his farm in a businesslike way."

During the years that the children were growing up money became more plentiful. We saw where we had made a mistake, brought more cows on the place, and fed what we raised to them instead of selling the crops. The milk was sent to a cheese factory, and, though of course the prices paid were not like those of to-day, other things were not so high either, and we soon began to have a bank account of which we had no need of being ashamed. All of our neighbors were also going into dairying, and the entire community was becoming prosperous. Most of the people built additions to their houses, bought more furniture, and my sister even bought a piano for her girls.

From the time that Robert was four years old he knew that he was to be a lawyer, and Polly and Bess knew that they were to go away to school and later teach in the city.

The children often showed a genuine liking for farm work when they were small, and Robert, especially, could very easily have been encouraged. He was a hard-working little chap, and full of life. When John, my sister's boy, bought a pure-bred Holstein calf with his own money, Robert was determined to do likewise. He was so excited and interested in his cousin's venture that for days he talked of nothing but the pure-bred herd he was going to have. Though it pleased Jim, he was not the kind of man to talk to his children, though he loved them dearly, and as I, the talking member of the family, had altogether different ideas, the boy gradually forgot his "pure-bred herd."

And so it was with all of their [CONTINUED ON PAGE 38]



What Do You Think About It?

WE WILL pay real money for the best letters giving us *your* opinion on this question. We want all angles, Father's, Mother's, and the children's. It's a big question, and one to which your answer may help other members of FARM AND FIRESIDE's family to make the right decision.

We want you to get down into your heart of hearts and give us your real experience, as this mother has given hers. She *hated* the farm, and vowed that *her* children should never live there. Now she is old, and sorry. Her flock has gone out in the world and found success after a fashion, but she is alone, and lonely. Her sister's children live on farms near her, and are making more money than *her* children make in the city.

We will pay \$15, \$10, and \$5, respectively, for the best three letters, and we will pay for any others we may use. Keep within 500 words, address Contest Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York City, and don't expect your letter back if it isn't used. We cannot return them. Awards and letters will be printed in April.

THE EDITOR.

home was a pretty dreary place. Our farm was in central Wisconsin, and consisted of two hundred acres. We did not keep many cows, never more than six, but those six made more work than do thirty to-day with the modern way of caring for the milk. The separator had not come into use then, and when I think of those pans of milk that were set morning and night, of the everlasting skimming and churning, I do not wonder that I wished for something better for my little girls.

Our groceries were paid for with the butter and eggs; the money received from the crops was put in the bank—that is, what was left after buying necessary machinery. The farm was getting run-down, so every year there was less money saved. How we did work, with hardly a pleasure to brighten the way! Twice a week we went to "The Corners" with the butter and eggs and to get the mail, and these were the bright spots in our lives, for we

Prolonging Shoe Service

By Emma Gary Wallace

UNLESS you are an invalid and have little use for substantial foot coverings, your shoe bill probably amounts to a good deal, and you are more than anxious, now that shoes have gone soaring skyward, to get all the wear possible for your expenditure.

Most people abuse their shoes, and so get less service than they should. As a woman's appearance is judged in a measure by the condition of her shoes and gloves, she cannot afford to wear shabby articles if she can help it.

For black shoes a bottle of polish, a bottle of vaseline, a pair of shoe trees, and a bit of old cloth are a necessary equipment. As soon as the shoes are taken off they should be put on the shoe trees so that creases and wrinkles are straightened out while the shoe is still warm. Before they are worn again, or as often as necessary, a little of the vaseline should be rubbed into the surface of the kid or leather to keep them soft and pliable, and the edges of the soles and heels should be blackened neatly. Occasionally the shoe itself may need polishing, but the frequent treatment of vaseline will prevent cracking and lengthen the life of the leather.

If the shoe is wet it should be dried at a distance from the fire, so as not to harden or crackle the leather. When it is dry it should be treated with the vaseline promptly.

Colored or white shoes are not difficult to keep in order if they are given regular attention. For most of these it is desirable to have a bottle of cleaning fluid especially intended to clean without destroying the color. A little soap and water, or gasoline used away from the fire, are often useful also. When the shoe is perfectly clean it should then be dressed with a tan, brown, gray, or bronze dressing, as the case may be, and careful attention given to the heels and the edges of the shoes.

Shoes last longer if they are not worn every day, but one pair alternated with another that the leather may "rest." Rubbers which have begun to break at the heel should be taken at once to a repair man. A perfectly good heel can be made if attention is given in time, and that, too, at small cost.

Soda to the Rescue

By H. T. Dobbins

HOUSEKEEPERS who have sought to aid in the food conservation campaign by drying vegetables, only to find them unpalatable, will be interested in the result of experiments conducted by Mrs. Arthur N. Park of Lincoln, Nebraska.

Mrs. Park tried soaking the dried vegetables for varying periods, but could find no way to make them tender. Eggplant, recommended as a substitute for meat, was soaked for as long a period as three days, and it was tougher than when soaked for but a short time. Mrs. Park tells the story thus:

"Finally I thought of soda. I had used it to help remove the hulls from corn for hominy, so why would it not bring the most stubborn of dried vegetables into submission? I was fearful of the flavor, so I used the soda cautiously. I tried fifteen slices of eggplant with one-eighth teaspoonful of soda and three cups of boiling water. In ten minutes the eggplant was tender. I could hardly believe it. I fried some, and it was delicious. I grew excited, and tried eleven different kinds of vegetables that afternoon. They were a success so far as tenderness is concerned. The flavor, exact time, and seasoning had to be worked out more minutely later, for I was much too excited then to experiment with any one vegetable long enough to settle all details.

"Contrary to all authority, the vegetables were a success when boiled without previous soaking, and the flavor was better. It made dried vegetables an easy and quick foundation for a meal, while long periods of soaking are tedious.

"Among the things found to be palatable under this method were apples, string beans, cabbage, carrots, celery leaves and herbs for seasoning, corn, eggplant, greens, kohlrabi, onions, peas, pumpkin, rhubarb, winter varieties of squash, and sweet potatoes. I believe that by varying the method of cooking or seasoning we can all like these. The cold-pack method is good, but it requires ten jars to hold as many beans as I can put in one after they are dried."

To Customers of Montgomery Ward & Co.

The Mid-Winter Special Sale by Mail for 1919 begins Wednesday, January 1st. The 120-page book of special bargains—about a thousand in number—should be delivered in your home by that time. In the selection of merchandise for the sale we tried to be particularly careful both regarding quality and prices. We knew it would have to be a bargain book, but more than that, the goods must come up fully to the standing agreement we have with our customers—*satisfaction guaranteed or your money back.*

Purchases for this sale were made long in advance, and in every case we have given the customer the benefit we were able to derive from our buying early in large quantities.

It was the plan to have every one of our customers receive this Sale Book. However, the United States Government, through the War Industries Board asked for curtailment in the use of paper, and to meet with that regulation we have been compelled to limit the number of Sale Books issued.

Here and there may be cases where some of our customers do not receive this January-February Sale List. We have reserved some to send to such of our friends as may

not have received their copy and are writing us for one. Of course, we shall be very glad to send you one at your address immediately under those circumstances, if you will kindly write as early as possible so that your request reaches us before they are exhausted. Meanwhile, don't wait; get at these bargains as early as possible. If your book has not arrived, do not hesitate to ask your neighbors for theirs; this Special Sale is so full of bargains that we do not want any one who has dealt with us to miss it.

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Should Farm Children Stay at Home?

(CONTINUED FROM PAGE 36)

plans. I do not remember that I ever deliberately turned them from an undertaking, but I was indifferent and by my actions dampened their enthusiasm. From their earliest years they heard country life spoken of with contempt, so it was not strange that they should not think very highly of it. They became more and more engrossed with their town friends and the pleasures that the town could give them, and, though they helped with the work after school hours, they were not interested, and waited eagerly for the day when they would be free from the despised tasks.

Robert finished high school, went to the State University at Madison, and then took a law course of two years. Polly and Bessie also finished High, and Polly was graduated from the university the year after Robert. Bessie went to Normal at Milwaukee.

John, Anna's boy, completed high school the same year my boy did, and then went back to the farm, where he worked with his father for two years. Later he went down to Madison to the agricultural college two winters. Mildred and Bernice also finished High, but to my surprise and indignation did not go any farther. I again told my sister that she was a selfish mother. She laughed, and said that she thought a course at home with her, in which they would be taught cooking, sewing, and household management, might not be a bad thing. She added that if they really were very desirous of going on with their education she and their father were willing to help them. "But they must help themselves too," she said. "If they do not want it bad enough for that, they do not want it very bad."

Evidently, the girls were perfectly willing to stay home and help their mother—those girls certainly loved their home!—for that is what they did until they were married. "I need them, so why should they go somewhere else?" said Anna during one of our arguments. "Home-making is rather an important work, and why should they not be learning it?"

How proud I was of my children, and how inferior the other lads and lassies seemed! I almost pitied their parents, but as the years pass I know that my sister was a wise woman, and I was the one that deserved pity for being so blind.

All of Anna's children live near her, but Jim says we might as well never have had any, for we never see them. Robert lives in a Western city, and has a very successful law practice. He has married, and he and his wife have two little daughters, whom we have not seen. Robert is a busy man, and it is hard for him to spare time to come for the visit which he is always promising.

POLLY taught for two years after graduation from college, but now all of her time is given to writing and lecturing. She has not married. Her life is devoted to the cause of Woman Suffrage, and all of her strength and energy are given to it. Polly is prominent among the club women of the State, and is considered a leader. Of course I am proud of my brilliant, talented girl, though I wish sometimes that she were more of a home body. For two weeks we have her with us in the summer, but she spends most of that time resting. Talk of work! Never in my hardest days did I utterly collapse as I have seen Polly do after a strenuous campaign.

And Bessie, my youngest child! She is enjoying all of the luxuries I wished for her, for she is the wife of a wealthy business man whom she met while teaching. I try to be content, though I have not seen her since she was married, and that was four years ago. She, too, has a baby daughter, and she has promised that she surely will come next summer. Jim and I are not planning on the visit, though, for we have been disappointed so often. She has not forgotten us—she means to come, but, like Robert, she is busy.

Yes, I have realized my hopes for my children. As I planned and dreamed, they are out in the world, respected and honored. I should be a happy woman. I was at first, but it is hard to be very happy when you are lonesome.

"What if I am lonesome; what if we do miss them?" I would say to myself during the first years that they were gone. "We are willing to be lonely in our old age—willing to do without the companionship of our children, knowing that they have escaped the treadmill existence of their parents."

Gradually, however, it has come to me that we need not have turned their faces

cityward. Our children could have remained in the country, and we still could have felt that their lives were successful. I would be a foolish woman if I were to think otherwise. My nephew, John, is an up-to-date business man, and his business, of which he is proud, is farming. His sisters, Mildred and Bernice, both of whom married country boys, do not lead narrow, restricted lives: they are wide-awake, modern young women, and their bright eyes and rosy cheeks testify that they are healthy ones.

DURING Polly's last visit we spent a day with her cousin Milly. As I looked at the two girls as they stood side by side, I thought of my old saying, "I do not want my girls to be worn-out drudges," and I sighed, for it was not the farmer's wife that was worn out, but my own daughter. Mildred and Polly are the same age, but I had to admit to myself that Polly looked ten years older than her cousin.

The day that we were there, Milly had six extra men to dinner, and, although she keeps a girl through the summer, she was a pretty busy woman. As far as work is concerned, matters have not changed much for the farmer's wife. Haying and harvesting mean just the same to her, for hungry men must be fed. But I know now that it was not the work in the old days that broke down the women. A young, healthy woman can stand a great deal if there is something to which she can look forward. It was the monotony, the days and days that were just alike, with no pleasure, no change—nothing but the same old thing week after week, month after month, and year after year. And the isolation—that was what caused the hungry, wistful look which was so often seen on the faces of the farm women. The telephone, the rural delivery, and the automobile have changed all that, and the country woman to-day can get as much from life as her city sisters; if she is a "slave"—my favorite word in the old days—it is her own fault.

These thoughts passed through my mind as we sat in Milly's cheery living-room—she hasn't such a thing as a prim, formal parlor. A piano stood open, and the piles of well-thumbed music upon it showed that it was used. The latest and best magazines were upon the library table, and the sectional bookcase was well filled with good books. A phonograph and a camera proved that the family did not give all of their time to work. What if Milly does get tired during the day, and what if her feet do begin to ache? It is all forgotten when she, her husband, and children go out for a ride in the big, roomy car, and she is rested far more than she would be if she went to bed.

Perhaps they will go to town or call on some friends, or it may be that they will just enjoy the ride. Anyway, it is a change, a pleasure.

In the fall Milly and her husband take a two weeks' vacation, and go for a trip by themselves, leaving the children with their grandmother, who is glad and willing to keep them. They leave all cares behind when they go on this vacation journey. Consequently, when they return, they are refreshed and full of new ideas and ready for the work which must be done. My niece Milly, although she is a farmer's wife, is not in need of pity—no, indeed.

Polly and I also spent a day with Bernice, who lives five miles from her childhood home. The husband of Bernice is not a rich farmer, but is young and progressive, and that means practically the same thing. He has a fine herd of cows, but his hobby is pigs, and he has one, Sir Walter, for which he paid twelve hundred dollars. When I told him I did not think there was a pig on earth worth so much, he laughed, and said Sir Walter would make more than that for him. I remember one fall that we sold some pigs for fifty cents apiece and were glad to get rid of them.

But it is when I go to John's home that I really regret that we made a lawyer out of our boy. Anna said her son would be on top by sticking to his father's business, and her words have come true. That little Holstein calf that John bought when he was fourteen was the foundation of what is now known as "The Hope Farm Holsteins," and John is one of the most successful breeders in Wisconsin.

When he married, his father deeded him an eighty, and advised him to buy an adjoining eighty that was for sale. The purchase price was twelve thousand, but they did not think that it was too much, as

there were good buildings on the place. It might have puzzled some boys to get that twelve thousand, but John had come a long ways since he bought his first calf, and, instead of one Holstein, he had twelve cows, nine yearling heifers, a three-year-old fellow, and some calves of both sexes. These were all registered pure-bred animals, and some of his cows had made exceptionally good records, so he did not have any difficulty in selling them for good prices. Four cows brought him two thousand dollars, an average of five hundred apiece; his three-year-old bull was sold for a thousand, one heifer for three hundred, one for two hundred, and some calves for prices ranging from fifty up to two hundred. Thus he had enough money to pay almost half of his debt, and had the best of his stock left. He borrowed the money needed at the bank, giving a mortgage on the place.

That was ten years ago, and for five of them John has been out of debt. He planned to buy more land, but his father wanted him to work the home farm, so he has that in addition to his own one hundred and sixty acres. There was a wistful expression on Jim's face when John's father said, with his arm about his son's shoulder, "This lad of mine will make dollars where I made cents, and have more fun doing it."

There are Holstein sales held in our part of the State every spring and fall, and my nephew always has a consignment. He has built up so good a reputation as a dealer and breeder that his stock goes quickly and at high prices. People from all over the United States come to these sales, and a cow of John's that made a seven-day record of thirty-eight pounds of butterfat was sold last year to a Texas man for fifteen hundred dollars. At the same sale a son of hers went for the same price, and a daughter for twelve hundred.

Besides the money he receives for his breeding stock, John's cream check is equal to the income of most professional men. Some mighty smart people come to Hope Farm to talk and confer with that boy who saw the opportunity at the farmhouse door.

My sister, Anna, is the happiest woman in the world, and takes more comfort with her grandchildren than she did with her children, and that is saying a great deal. A path across the fields, worn by little feet, tells of the many visits to "Grandma's house," and sometimes I see the grown-up boy taking the same path for a little chat and perhaps a lunch with "Ma." Anna is as enthusiastic and inspiring as she was when he was a little boy, and she is reaping her reward in the love and confidence that John gives her.

My husband and I are growing old, and the farmwork is getting too much for Jim. We have come to the conclusion that we must either rent or sell; and, though Jim does not talk much about it, I know it breaks his heart to think of parting with the old home. But we might as well, for there is nobody who cares enough about the farm to live here when we are gone. We did not raise our children to be farmers.

If I could but go over the road again!

Bringing the Home into the Church

By F. L. Garside

USUALLY you hear discussions of how to bring the church into the home; but it was the reverse of that problem that confronted Mr. and Mrs. William Milton Hess when Mr. Hess became pastor of Trinity Church, the Bronx, New York City.

There wasn't any parsonage, the congregation couldn't afford to build one, and the pastor and his wife wanted to live near the church. They ended by living right in it. A room in the tower 16 feet square was remodeled into a living-room—and a mighty pleasant room it is, with Oriental rugs, good pictures, and an open fireplace.

A tiny spiral stairway leads to a mezzanine just large enough to hold a chair and a writing desk. This is the parson's "study." And above it the stairway leads to a bedroom.

There is also a bath, steam heat, electric lights, and all the other things



This is the only church known to us that has a shower bath in the steeple

that go with less churchly homes. Mrs. Hess cooks by electricity. She has had six guests for dinner, and served no apologies with the coffee.

Her husband is now at one of the army camps, and in his absence Mrs. Hess conducts all the activities of the church.

Easy Home-Made Soap

By Pearl Sims

A SOAP which is excellent for laundry purposes can be made from bits of rancid fat. The process is simple: Dissolve two and one-half tablespoons lye in eight tablespoons water. Add to one cup melted fat. Beat with an egg beater for about ten minutes. Pour out and let harden. It is best not to use it for a month or two. This soap can be made in small quantities, and it also has the advantage of not requiring cooking.

Economy in Fats

By Emma Gary Wallace

NOW that the demand "Don't Stop Saving Food!" greets us wherever we turn, it behooves us to school ourselves against reverting to the careless ways of pre-war days. Mr. Hoover tells us that fats are scarce, so of course we must continue to economize in the use of butter. We can do a great deal in this direction by utilizing vegetable and meat fats.

Many of us have been prejudiced against the use of oleomargarine, especially when we have been accustomed to plenty of good butter to use at all times, but a good quality of oleomargarine is much more economical for many uses than butter. We must not lose sight of the fact that oleomargarine made from vegetable fats can be very pure and wholesome indeed, and for cake-making, frying, shortening, vegetable seasoning, etc., it answers every purpose at a substantial saving.

The clarified fat from chickens, ducks, turkeys, and geese makes the most delicious of cooky shortening and the flavor of the fowl cannot be detected in the finished food. All drippings from meat should be carefully saved, clarified by being heated with sliced raw potato, and strained. The drippings from beef and pork will go very nicely together, but the hard fat of lamb or mutton has not been in favor in the family household for the reason that its tallow flavor and consistency were not relished, but war-time measures have taught us that we can use mutton fat to good purpose by taking a little trouble.

Take equal parts of hard or mutton fat and soft fat, such as beef suet and pork. Cut into small pieces, and melt together in the double boiler. For every two pounds slice in an onion, an apple, a potato, and put in three or four cloves, a bay leaf, and a teaspoonful of salt. Cook until the fat is thoroughly extracted and the potato and apple seared. Strain the melted fat into a bowl through muslin. Set aside to cool. Keep watch of it, however, and just when the edges begin to harden beat briskly with an egg beater until almost cold. This beating prevents the hard and soft fats from separating and makes the "savory shortening" light and fluffy. This is especially desirable for use in cooking, and even in pastry-making. Less onion may be used if desired.

MAPLE CHEWS—Boil, until crisp in cold water, two cups maple syrup, one tablespoon vinegar, and two tablespoons water; add one tablespoon melted butter or oleomargarine, and pour into greased tins. When cool, pull until light.

POPCORN CANDY—For making popcorn candy, either honey, maple syrup, molasses, white cane syrup, or corn syrup may be used instead of sugar. To one cup syrup allow one tablespoon vinegar. Boil together until the syrup hardens when dropped into cold water. Pour over freshly popped corn, and mold into balls or fancy shapes. Little popcorn men will please the children. Mark in the features and the outlines with melted chocolate.



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More Durable-DURHAM Stockings—the kind that everybody in the family likes so well because they are good looking and long-wearing.

A mother soon learns to know good stockings. She sees where they wear out first. She sees that Durable-DURHAM stockings are extra strongly reinforced at these points of hardest wear.

She learns that money is saved and darning is avoided by purchasing

DURABLE DURHAM HOSIERY

FOR MEN, WOMEN AND CHILDREN

Made strongest where the wear is hardest

This hosiery is not only extra strongly reinforced to make it wear longer but is superior in other ways. Legs are full length and tops are wide and elastic. All sizes are correctly marked.



ALPINE

A warm and comfortable stocking. Double fleecy-lined throughout. Full of warmth and full of wear. Extra wide and elastic flare top. Double reinforced heels and toes. Black only. Price 35c pair

Free Catalog, showing all styles, mailed on request.

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Feet and toes are smooth, seamless and even. The Durham Dyes are fast so that colors will not fade from wearing or washing.

Durable-DURHAM Hosiery includes styles for every member of the family, for work, play or dress, for every season of the year, retailing at 25, 35, 40 and 50 cents per pair.

For coldest weather, Durable-DURHAM Fleecy-lined Hosiery gives comfort

This hosiery is strong and warm, with thick, soft fleecing that protects from Wintry cold.

You should be able to buy Durable-DURHAM Hosiery at any dealer's.

If you do not find it, write to our Sales Department, 88 Leonard St., New York, and we will see that you are supplied.



ROVER LAD

A good medium weight substantial stocking for children. Triple reinforced knees. Strongly double reinforced heels and toes. Feet and toes smooth, seamless and even. Black and white. Price 40c pair



TAR HEEL

A medium weight sock with 3-thread, strongly reinforced heels and toes. Elastic ribbed top securely knit on. Feet and toes are smooth, seamless and even. Black, tan and white. Price 25c pair

Durable-DURHAM Hosiery is not a product of Child labor. No person under 14 years is employed. Average working day is 8 hours and 15 minutes. Industrial conditions under supervision of experts trained in U. S. Government courses on employment management.

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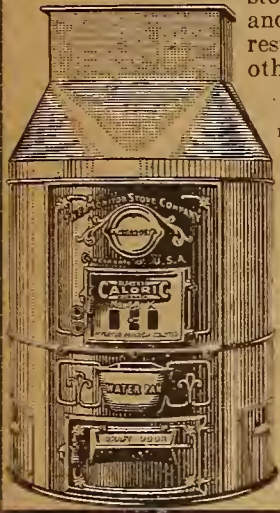
Irwin Lamb, Lancaster, O., writes that in his ten-room house, "All winter, the coldest Central Ohio has had in my lifetime, we burned ONLY SIX TONS of soft coal to keep us warm through all the house."

N. I. Stearns, Brookings, S. D., says he kept his eight-room house comfortable all winter, even when the temperature dropped to 30° below, at a total consumption of ONLY FOUR TONS of coal.



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To Prove Our Fine Quality we offer these fine pants for dress or business, many handsome styles, genuine through and through worsted goods, beautiful narrow weave, smooth silky finish, guaranteed for 2 years solid wear and satisfaction and regular \$5.00 value or MONEY BACK. These stylish \$5.00 pants, while they last, only one pair to any customer, by prepaid express, for only \$1.85
Cash Profits You can earn a lot of extra money by sending orders for your relatives and neighbors. Young Grant Case made \$27.00 first week and over \$500.00 his first year. Get his own book about it Free—also fine tailor book, cloth samples and simple directions. All goes to you Free with first letter. Just send us your name—TODAY.
CHICAGO TAILORS ASS'N.
Dept. C405 515 S. Franklin St., Chicago

Captain Sugar's Substitutes

A Playlet for Children at School

By Emily Rose Burt

CHARACTERS

GENERAL FOOD RESOURCES, in general's uniform.

CAPTAIN SUGAR, in captain's army uniform.

MR. CORN, in green coat (like raincoat), yellow waistcoat, green pointed soft hat.

MISS HONEY, in amber-colored dress of seersucker or honeycomb material.

MISS MOLASSES, in molasses-colored dress of shiny cambric, hair in braids.

PETER POPCORN, in white suit with crisp scalloped frills at waist, ankles, neck and sleeves; round white cap with scalloped white frill.

MADAME CHOCOLATE, in chocolate-colored dress with white apron.

MR. PRUNE, in black cambric wrinkled-looking costume.

MR. DATE, in brown cambric wrinkled baggy costume much like Mr. Prune's.

MR. FIG, in brown cardboard costume like "sandwich man."

THE FRUIT GIRLS, in raspberry or peach-colored, golden or pale-green cheesecloth draperies, with wide straw hats.

THE NUT FAMILY, in cambric costumes in proper colors, cut and stuffed to resemble respective nuts mentioned.

GRANDMOTHER GINGER, stooped over, in olive-green, with imitation snow sprinkled on shoulders and bonnet.

SCENE I.

Office of General Food Resources. GENERAL FOOD RESOURCES at desk. Enter CAPTAIN SUGAR (salutes).

GENERAL F. R.—Well, Captain Sugar, so you're leaving us for overseas service? (Motions Captain Sugar to a seat.)

CAPTAIN SUGAR (sitting down)—Yes, sir, and glad to go too. I'm needed over there. If it weren't for saying good-by to everybody at home, I'd feel fine. But what about people's puddings and cakes and candies when I'm gone? Without boasting—folks do depend on me, especially the children.

GENERAL F. R. (making reassuring gesture)—Don't you worry, Captain Sugar. We'll find substitutes somehow. I've several in mind right this minute. And if folks miss you, remember that they'll only appreciate you the more when you return.

CAPTAIN SUGAR—I hope that's so. Would you mind telling me who's to have my job?

GENERAL F. R.—Not at all. I intend to have a talk first of all with Mr. Corn. Then I'm sure the Maple Brothers will help, and I'll wire the Busy Bee Company to see if they can spare Miss Honey to help us out. CAPTAIN SUGAR—Would you consider a relative of mine, Miss Molasses? A little crude perhaps, but like me in many of her ways.

GENERAL F. R.—Fine! I'm sure there'll be other volunteers when they know the situation. Don't you worry, Captain.

CAPTAIN SUGAR (rising)—I've the fullest confidence in you, sir. (Salutes.)

GENERAL F. R. (returning salute, extends hand)—Good-by, Captain Sugar, and good luck! (Exit Captain Sugar.)

SCENE II.

A workroom, large sign, Dessert Department. Door right, with sign pointing to it labeled, To Candy Department. Door left, Service Flag with one star hanging in conspicuous place. Tables with big kettles and cooking utensils. MADAME CHOCOLATE overseeing; MISS HONEY stirring something in big pan; MISS MOLASSES running around room gaily. Enter PETER POPCORN from candy-room door, catches Miss Molasses around waist, and they dance about the room.

PETER POPCORN—Those Scotch kisses of yours are all right, Miss Molasses. Won't you let me try one?

MISS MOLASSES (saucily)—Yes, if you won't get stuck up. (Kisses him quickly and dances off and out at left.)

PETER POPCORN (speaking to Miss Honey)—And how are you, Honey?

MISS HONEY (sweetly)—Miss Honey, please!

PETER POPCORN (facetiously)—I don't want to miss Honey. What doing these days?

MISS HONEY—I've just made some lovely little cakes. But I can't do all the work. More help is certainly needed around this place.

PETER POPCORN—Well, we've advertised. There ought to be lots of applicants

this morning. They may come any time. (Enter MR. PRUNE, MR. DATE, MR. FIG.)

MADAME CHOCOLATE (coming forward)—Good morning! What can we do for you?

MR. PRUNE (speaking for the three)—We came to see what we can do for you. I'm Mr. Prune, these are my cousins, Mr. Date and Mr. Fig.

MADAME CHOCOLATE (beaming)—You're all well known to me, and you can make yourselves very valuable here. Peter Popcorn, won't you introduce them to the Candy Department.

(Peter Popcorn and Mr. Prune, Mr. Date and Mr. Fig exit to right to candy-room. Enter left, FRUIT GIRLS, giggling.)

MADAME CHOCOLATE (greeting them)—What can I do for you?

FIRST FRUIT GIRL—We want to offer our services to the Dessert Department and be of some use.

MADAME CHOCOLATE (delightedly)—How splendid! Miss Honey, will you show these ladies where to hang their hats?

(Miss Honey escorts the Fruit Girls out right. Enter left, MR. NUT, made up like English walnut, and family, comprised of MRS. ENGLISH WALNUT, BABY HAZELNUT, several PEANUT boys, and ALICE ALMOND.)

MR. NUT (bowing to Madame Chocolate)—We may be nuts, but we're patriotic. Do you think General Food Resources will let us work for our country?

MADAME CHOCOLATE (cordially)—You are more than welcome, and you can be of the greatest help. In fact, I know the very place for you in our candy-room. (Calls Peter Popcorn, who enters). Won't you show our friends, Mr. Nut and his family, into the candy-room?

(Exit right Peter Popcorn and Nut Family. Enter left OLD LADY GINGER. Madame Chocolate conducts her to a seat.)

OLD LADY GINGER—I've come to help. You may think I haven't it in me, but let me tell you that I'm full of ginger. Extra well preserved, that's what I am, and I can do some of this substituting business as well as not.

MADAME CHOCOLATE (warmly)—Indeed you can. I know it.

(Enter left, MR. CORN and GENERAL FOOD RESOURCES.)

MR. CORN—Well, Madame Chocolate, how's everything going here?

MADAME CHOCOLATE—Beautifully, Mr. Corn. How's the Cake-Frosting Department? And do let me tell you the good news right off! We've had a lot of volunteers come in this morning to help us. Here's Grandmother Ginger now. (Mr. Corn bows). I'll ask the others to come in. (Steps to door of candy-room. Speaks to Peter Popcorn, who ushers in Mr. Prune, Mr. Date and Mr. Fig and the Nut family. Meanwhile Madame Chocolate has ushered in Miss Honey, Miss Molasses, and the Fruit Girls. All group themselves before Mr. Corn and General Food Resources.)

GENERAL F. R.—Well, we'll certainly do great things now, I expect. This is perfectly splendid. In Captain Sugar's name I welcome you all.

PETER POPCORN (stepping forward and saluting General F. R.)—May we give three cheers for Captain Sugar over there?

(General Food Resources nods. Peter Popcorn leads cheer for Captain Sugar.)

TABLEAU.
CURTAIN.

A Novel Economy

By Alice Crowell Hoffman

A MOTHER of four growing children hit upon a scheme for cutting out crackers, pretzels, and bread which her children were accustomed to eat between meals. Any left-over cereal, mush, or porridge is poured into muffin pans and stood in a cool place. When it is thoroughly cold the muffin pans are inverted and the shiny cereal cakes arranged on a dish to await the foraging of the youngsters. The children are fond of them, and they are more satisfying than crackers.

It is as easy to get the habit of scraping the left-overs into muffin pans as into garbage cans, and it is far more in accordance with the present-day thrift policies. When the ordinary left-overs do not meet the demand, it is economy to cook a little more mush, rolled oats, etc., than usual, in order to fill the pans.

Hot Dishes for Cold Days

OXTAIL AND CARROT STEW—Brown two jointed oxtails and two sliced onions in hot fat. Put into a kettle, add six medium-sized carrots sliced, two teaspoons salt, one-eighth teaspoon pepper, and cover with boiling water. Cook slowly for two hours, or until meat is tender. Thicken the gravy with two tablespoons browned flour. If potatoes are desired, add the required amount half an hour before the stew is done.

CABBAGE SOUFFLÉ—Cut a medium-sized cabbage in quarters and put on in cold water to boil. When it has boiled fifteen minutes drain off the water, cover with hot water, and boil again until it is tender. Drain as dry as possible, chop fine, season with salt, pepper, and butter or butter substitute. Beat together until light two eggs, and add four teaspoons cream. Add this to the prepared cabbage, mix well, and put into a greased baking dish. Sprinkle the top with bread crumbs, and bake.

CORNER-BEEF HASH—Remove skin and ristle from cooked corned beef. Chop the meat and do not use too much fat. Add an equal quantity of chopped cold boiled potatoes, season with salt and pepper, put into a hot greased pan, moisten with milk or cream, and stir up well. Then spread it out evenly and leave it where it will brown.

Crocheted Hand Bag



COMPLETE directions for this novel hand bag will be mailed to you on the receipt of four cents in stamps by the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio. Order No. FC-112.

lowly underneath. Turn and fold on a hot latter. Cold roast beef may be used in the hash with the corned beef, and finely chopped cooked beets may be added.

BEAN BALLS AND MACARONI—Mash baked beans to a pulp, add one beaten egg, one-half teaspoon minced onion, and a seasoning of salt and pepper. Form into balls, dip in beaten egg and bread crumbs, and set in oven for five minutes. Serve on boiled macaroni that has been covered with grated cheese.

BAKED SQUASH IN THE SHELL—Remove the seeds and pulp from half of a Hubbard squash. Bake in the oven until it is easily pierced by a fork. Remove from oven, dig out the cooked pulp, add butter, salt and pepper to taste. Reheat and serve. This is a much easier and quicker way than the usual method.

POTATO PIE—To one quart hot boiled potatoes add enough hot milk to moisten. Season with butter and salt. Mash in kettle in which they were boiled, and beat with a fork until light. Stir in one-half cup minced ham. Have ready four hard-boiled eggs and one-half cup stock or gravy. Arrange potatoes and sliced eggs in dish in alternate layers, with potatoes forming top and bottom layers. Moisten with the gravy. Brush over the top with milk or egg, and brown in hot oven.

This dish can be arranged in three layers, with the middle layer some kind of meat hash together with egg or thickened gravy.

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For the boys
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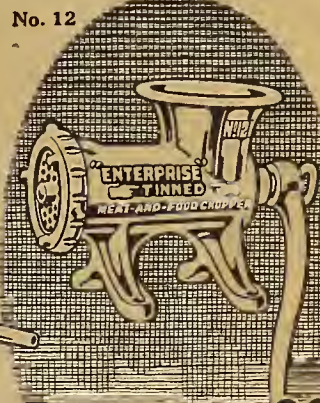
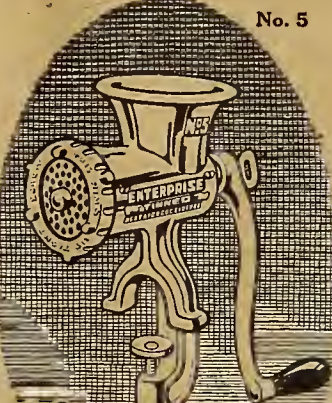
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The common cast-iron chopper, lacking these features, with cast-iron cutters instead, crushes out the food juices that make food palatable and nutritious. The No. 5 "ENTERPRISE" Meat-and-Food Chopper with table clamp, is found in homes where the differences in choppers are understood. Price \$3.00. The No. 12 machine has greater capacity and is used largely in preparing food for market. Price \$4.25.

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Try it for those many ills for which grandma used a mustard plaster. It quickly loosens up a cough. It reduces inflammation in cases of sore throat. It relieves bronchitis, neuralgia, lumbago, rheumatism, stiff neck, sore muscles, sprains and strains. It often prevents pneumonia.

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The Mystery at Glen Cove

[CONTINUED FROM PAGE 18]

to any subterranean investigation, which, Steele gave me to understand, was properly his province.

Acting under this division, I at once made myself presentable and paid a long-deferred call upon Agatha's mother. She was a perfectly transparent lady, and it took but a moment to ascertain that, so far as she knew, Agatha's only deviation from normality had been the achievement of the semi-finals in C flight at the Golf Club six weeks previous.

Mr. Carter she recalled very vaguely as a young man to whom Agatha had served tea one afternoon some time ago. No, Agatha had not again referred to him. No, that was not singular; Agatha had so many young men. My call was fruitless.

That night I met Steele, as prearranged, at the Yacht Club, and we dined privately. He was not surprised at my report.

"It bears out my notion that Agatha knew Carter a great deal better than she wanted her mother or anyone else to suspect."

"What have you found out?" I asked. "I don't know yet," he replied ambiguously. "It remains to be seen."

"But you have found something?"

"Yes, a little. It seems that there's an old summer house down near the water's edge on the Burchard place. For years it's been used only to store discarded garden equipment, but there are vague stories afloat below stairs about mysterious lights in the old shed's windows."

It was thereupon decided that we should spend the night watching the mysterious summer house.

Steele led the way to a spot he had discovered where, securely hidden in the thicket, we could command an excellent view. The moon had risen, and a silvery shaft of light creeping through the foliage threw the doorway to the pavilion into bright relief. No one could emerge without our being witness of the fact.

Perhaps fifteen minutes after taking up our vigil the door opened slowly, and a man stepped out. He hesitated a moment, looking furtively about him, and then, with a certainty which betrayed familiarity with the surroundings, glided off into the darkness.

A sharp tug at my arm apprised me of Steele's purpose, and I scrambled after him. We did not have far to run. Indeed, the goal appeared so suddenly that but for Steele's detaining hand I would have stumbled out into a small clearing.

OUR quarry had halted near a bench, where he stood gazing intently out to sea. His eyes seemed fixed upon the black horizon with some definite purpose. Suddenly he turned, like a startled animal, and leaped lightly into the shadow. From the thicket on the far side of the clearing I could hear a faint rustle of branches.

Presently a shadow fell across the grass, the leaves parted, and a woman with a dark shawl over her head stepped out.

The man by the stone bench was clearly not surprised, for he emerged boldly from his concealment. I caught a faint murmur of voices. Then the woman rushed toward him, to throw her arms around his neck. His response to her embrace was no less tender. I was puzzled. The natural assumption that the woman with the shawl was Agatha Burchard had to be rejected, for my young cousin was certainly slither than the woman before us.

As they separated I caught a faint flicker of white between them, as if she had passed some sort of package to him. But even as I was speculating a new sound was borne to my ears on the slight breeze. The couple seemed to hear it at the same time. The woman half turned as if to flee. The man stood fixed, listening intently.

What we heard was a low, rhythmic pulsation, only faintly audible above the sighing of the wind in the treetops. I followed the man's gaze seaward. Suddenly, almost on the horizon, a point of light appeared, followed instantly by dense blackness. The flash was twice repeated. Rapidly the steady hum grew louder. I decided that it was a boat of high power coming toward the shore.

Abruptly the vibration ceased, intensifying the silence so that the chirrup of the crickets sounded piercingly in my ears. Then a new noise was audible, a regular pound, followed in a minute or two by a subdued scrape. It was a boat with muffled oars drawing up on the beach.

The figure listening so fixedly by the stone bench suddenly sprang to life. Turning to the woman for a last, speedy embrace, he glided swiftly and silently down the steps to the water's edge.

Just before he disappeared from view below the wall a beam of moonlight rested on his face.

"Did you see?" I gasped, making an involuntary movement of pursuit. But Steele's iron grip restrained me. The futility of my impulse was immediately apparent. The subdued rumble of oars in their row locks reached our ears, followed by the unmistakable sound of a propeller getting under way.

CARTER had unquestionably eluded us. But the woman in the shawl, still gazing fixedly toward the blank emptiness of the horizon, offered possibilities of revelation. She stood immobile for several minutes. Then she turned and disappeared into the thicket from which she had come. A whispered command apprised me of Steele's purpose, and I hurried after him as he sped in pursuit.

I paused, however, for a last scrutiny of the sea. Well down to the horizon, with a brown murk of smoke behind it to bespeak the laboring engines, was a long, low, black shape—unless my eyes were playing me incredible tricks, a torpedo destroyer! Burning with excitement at the discovery, I plunged after the crackle in the bushes which I took to indicate the progress of Steele.

Suddenly the path turned to the left, leaving the water, and took a sharp ascent. I understood, then, where I was. I knew that a short detour would bring me again into the same trail, well in advance of my companion, where I could await him. I turned into the short cut, and when I had arrived at the point where the two paths again joined I sat down on a convenient log.

From the distance I had come I expected to wait but a moment. The moments dragged away, however, and I was just about to return along the first path in search of Steele when an unexpected sound startled me. I shrank back into the safe obscurity of the thicket, and waited.

Presently, out of the darkness, appeared two figures, walking slowly. One of them was instantly recognizable as Steele; his lithe gauntness was unmistakable. His companion was at first a mere patch of gloom, but as she approached, a shiver ran down my spine. It was the woman in the shawl! It was Marie Brandt!

They halted so near to me that I could have touched them without stretching.

I suppose I should have revealed myself to them at once. But I had heard so much of their conversation before my slow-moving brain asserted itself that I dared not, in mere tact, give evidence of my presence. I remained where I was—an eavesdropper against my finer nature.

"Won't you tell me—now?" Steele asked wistfully.

In the moonlight I could see her head shake.

"Not now," she whispered.

"But can't you see what your silence makes me suffer?" he pleaded. "Your disappearance like that! Don't you see how you are linked up with it?"

"You think I am linked up with it?" she asked softly. "You think I played a shameful part?" My fingers clenched at the subtle cruelty of her words. Steele's anguish was all too patent.

"No!" he declared. "N—not that!"

"But—if—if he had died, what would you have thought?"

Another groan escaped the unhappy man.

"I swear to you," he said earnestly, "I thought only of what harm might befall you."

"And if I were to assure you that I am no longer in peril would you cease to follow?"

For a moment he was silent, and I could sense the struggle going on within him.

"It is not fair," he said presently, "to know—nothing. If you could only give me a hint—just a word that I might—"

"And suppose I could not give even a hint?"

"I must continue to suffer, then," he sighed wretchedly.

"And if you thought I was in peril?" she spoke very softly.

"I would follow through hell itself," he breathed fervently.

"You—you care—like that?"

Suddenly his hand shot out and grasped her wrist. "Oh, Marie, don't spar with me," he cried passionately. "You know the truth, utterly. I love you. Is it that—you care nothing for me? Tell me, is that your answer?"

She was silent for a moment, and then when she spoke it was so softly that I could scarcely hear her reply.

"No," she breathed, "it is not that."

"Then why—tell me—why?"

She ignored his question.

"Go back to your old ways," she pleaded. "Forget that you ever knew me. You can not help me. No one can. You can only hinder, however well meant your effort."

Believe me, you have no idea of the forces arrayed against you, the odds that you face. Can't I make you understand that, however you try you can only make it harder for me—perhaps impossible? Won't you see—oh, please, won't you see that I must play my hand alone, quite alone?"

"I see nothing," he muttered hopelessly.

"That is as it must be," she replied firmly.

"There may be a time—"

"Light will come then?" he cried eagerly.

"In its own time," she murmured. "Not before."

Remember, my friend, I ask this of you, not alone for my sake and for yours but for the sake of countless millions. I may not tell you more. But believe when I tell you that in my frail hands rests the happiness of many human beings. A single false step on your part might mean incalculable misery. You must not risk it."

"What do you want me to do?" he asked dully.

"Go back to your old ways. Forget me and all that you have associated with me."

"Forget you?" His laugh was ghastly.

"You must."

"You are to go out of my life—like this?"

You who have filled it as I never believe anything could fill it, who have made it something precious, who have—"

He choked, unable to go on.

She bowed her head. When she looked up I could see something glistening in her eyes. Her voice trembled faintly.

"Even so," she murmured. "Believe me—it is for the best."

"But will it be—forever? Oh, Marie, it must not be that! If the day ever comes when this awful load is off your shoulders—"

oh, I cannot put it as I would, but you understand, don't you, dear? Have I the right to hope?"

She shook her head.

"Only a faint one—the tiniest hope that ever kept a man's soul to his body? Please—oh, if you knew—"

"I must go now," she said nervously.

"But first"—he caught at her arm—"please, I must know that. I must!"

HER reply was like the gentle sighing of the breeze in the trees, almost indistinguishable as speech. But it was enough for Steele. He crushed her in his arms in a passionate embrace.

I turned my head away, curiously embarrassed. When I returned my gaze the lady was disappearing, a faint flash of white in the darkness of the trees.

I was in doubt as to just how to proceed. Steele was sitting where she had left him, in an attitude of the most profound dejection. I could understand his wretchedness, although I could not wholly sympathize with it. But, in either event, I was sorely troubled.

What would he do next? Would he consider himself obliged to obey her wishes, and give up all connection with the problem?

I was annoyed by the turn events had taken. I had entered upon the solution of the "Glen Cove Mystery" very largely because Steele had insisted. But a temperamental penchant for the mysterious had insidiously laid hold upon me. Mrs. Brandt's incomprehensible words had only served to heighten my curiosity. Her manifest anxiety to throw us off the trail merely indicated to me that we were perhaps more closely involved than we realized.

I rather flattered myself that it was fortunate for Steele that he had a practical, impervious, old hard-shell like me for an associate. I could not be bought off with woman's tears. I might physically resemble the bloodhound very slightly, but I resolved to be complete in my emulation of the nature of that useful beast.

Without further hesitation I set off in pursuit of the lady.

[TO BE CONTINUED IN THE FEBRUARY ISSUE]

FARM AND FIRESIDE

The National Farm Magazine

FEBRUARY 1918

5¢ A COPY



IN THIS ISSUE—“My Tractor Has Come to Stay”

Harry Asked Me to Write an Advertisement to Farm and Fireside Readers

It Was a Big Job, but Here's the Story



MRS. H. H. JOHNSON

I AM going to talk to business women. That means to every woman reader of this paper, for I believe every woman has got to have a business man's head this year.

Maybe this will interest a few men readers, too, and if so, they are mighty welcome. They will find their time well spent; but read my story.

Food production is the biggest business in the world. It's more important than making steel and iron, running railroads, mining coal, putting up buildings, or doing anything else, for all these industries could not be possible if some one did not produce food.

I want to help *you* become a bigger food producer this year. And I am going to help you make more money, too.

Raise More Poultry

I asked Mother Johnson, who lives next door to us, what she thought poultry raisers were going to do this year. She said: "I am no prophet, but, when less than 25c will produce a bird worth \$1.00 or more, or feed a laying hen that will give five or six dozen eggs in two or three months, one does not have to guess at whether poultry raisers will make money. They should make more this year than ever before."

I don't know a better business that one could take up. Poultry meat is the quickest meat that one can produce. From a basketful of eggs you can have birds ready for market in six or eight months. Do you know of any other meat animal that can be matured in that time? And do you know of any other animal that can be produced for so little compared with the price you get?

Have A Business Of Your Own

Make poultry raising on your farm a business proposition. Here is your opportunity to build a profitable business right in your own backyard. A business that's applauded from one end of the country to the other because it means food production.

But I can hear farm women say, "I am already raising poultry." I mean raise *more* poultry. Mother Johnson had 800 chickens one year and 1100 another year, and as a girl I myself took care of about 700 year after year for father before he started in the fancy poultry business.

You can find the time and you will find there's money in it. It will be an interesting way

to get away from indoor work, and if you don't do more than make enough to pay your household expenses it will still be a mighty good business. One of our customers, Mrs. Rose Knauss of Altoona, Pa., cleared enough off the sale of her Black Polish pure breeds in one season to build herself a fine new house. She came into national fame selling one bunch of five fowls for \$2900.

Mrs. Albert Ray of Delavan, Kansas, made a specialty of White Leghorns and Bronze turkeys, and put her family through college, partly from poultry profits.

Mrs. A. M. Anderson, of Holdingford, Minn., writes: "We set our Old Trusty only twice, with 108 eggs each time, and our profits were \$192.21."

Thomas Ashley of Kimball, S. D., writes: "Using only one Old Trusty in 1917 we sold \$350 in eggs, \$200 in roosters, \$200 this fall in hens, and fries and eggs used in the home and eggs for hatching would come to at least \$100. (\$850 in all.) This year I used two Old Trustys, raised 700 chickens and consider them now worth one dollar apiece."

But I could quote hundreds of letters like these. They all show what one can do. But why not see what *you* can do? Write and let me help you get started. I want to help more women to become money-making poultry raisers this year. And I have made the plans for them. Let me tell you what they are.

Ask For Our Book, It Will Help You

I am never afraid to send this book to anyone. I know it will help. It deals with practical poultry raising. Not as a fancy art or a something that requires lots of time, but gives simple, everyday helpful suggestions which 99 people out of 100 want to make a success. Size, 9 x 12 inches. It's a bigger and better book than the Johnsons ever published before, and this is their 27th year in the business. We mail it *free* to anyone who will send their name and address.

Old Trusty—Freight or Express Prepaid

I could say a whole lot about Old Trusty—how well it's made, how dependable it is, how well it satisfies our 800,000 customers, how easy it is to understand and operate and how it shells out big hatches in any weather, but I'll leave that for our book. We build Old Trusty in handy home sizes, with or without the galvanized metal cover. We have the size to fit your needs and at a price that fits your purse. But that's for our book to tell you. All I want to do is to show up the money-making possibilities in poultry raising.

Have I interested you? Write and tell me. I'll be glad to hear from you. Tell me something about your poultry, if you have any. The man or woman raising poultry is in the greatest business in the world—that of food production. Write and let me tell you more about it.

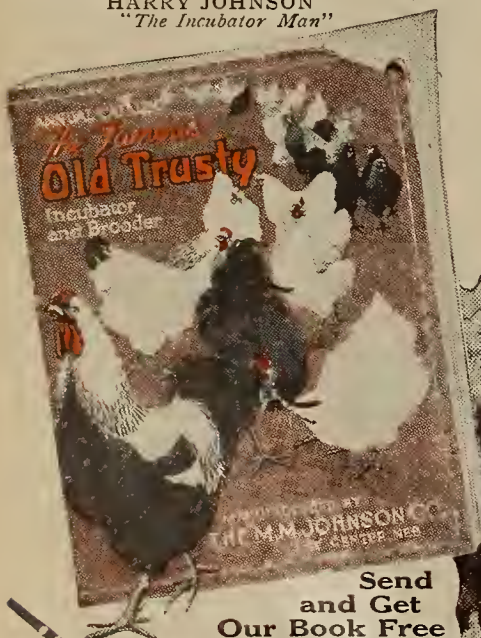
Yours truly,
MRS. H. H. JOHNSON

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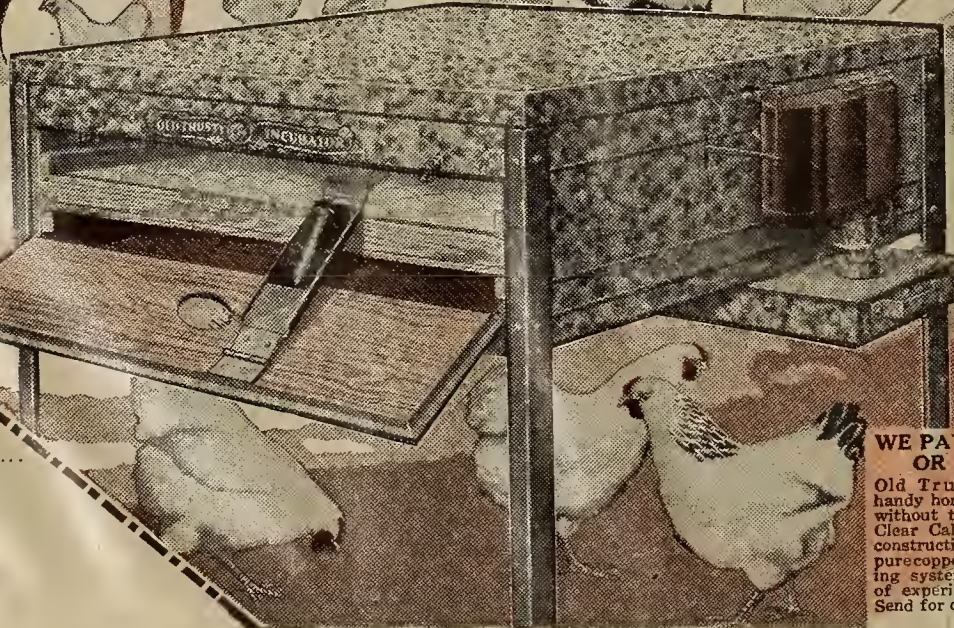
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If You Can't Fall in Love with Your Job, for Goodness' Sake Change It

By Bruce Barton

A YOUNG man writes me this letter: "I am employed in the post-office at \$100 a month. The salary is sufficient to keep my family comfortable, but I simply loathe the work. I see no chance of promotion in it, and it demands so many of my evenings that I have practically no home life at all. Don't you think that under these circumstances I am justified in looking around for something more congenial?"

My answer to him is: "Every day you remain in that post-office is a day lost out of your life. You are to live only once. What is the very best thing a man can get out of life?"

"To be happy in his work and at home."

"You are happy neither in your work nor at home. You are wasting the only existence that will ever be yours in this world. You will come to the end of your road and, looking back, will say to yourself: 'I was cheated. Other men had life and happiness: I had only life.'"

"No matter what the immediate sacrifice, find your real place in the world—the job that will call out your whole best self."

"For until you have found it you bear on your forehead the mark of discontent that employers shun. The stars in their courses fight against you."

"'No matter what your work is, let it be yours,' said Emerson. 'No matter if you are a tinker or a preacher or a blacksmith or president, let what you are doing be organic, let it be in your bones, and you open the door by which the affluence of heaven and earth shall stream into you.'"

"I know of nothing so inspiring as to read the lives of men who were in love with their work."

"Agassiz, the great naturalist, used to say that he believed 'the fishes would die for him just to give him their skeletons.'"

"Edmund Halley, the astronomer, was another happy workman."

"Finding, in his youth, that other astronomers had undertaken to catalogue the stars of the northern hemisphere, he loaded a telescope on a boat and started to the southern hemisphere. On shipboard he was busy every minute, and made important discoveries."

"Then it occurred to him that if one could study the transit of Venus—that is, observe Venus at the time when her orbit crosses the orbit of the sun—one could gather data from which to figure the weight of the sun, its distance from the earth, and many other important facts about the solar system."

"But the next transit of Venus was not to occur until 1769. It was almost certain that Halley could not live that long."

"As a matter of fact, he died in 1742."

"But when 1769 rolled round, the astronomers of that day found all ready and waiting for them the formulæ which Halley had prepared."

"The man who had loved his work so whole-heartedly in life lived on triumphant over death. His devotion had won him immortality."

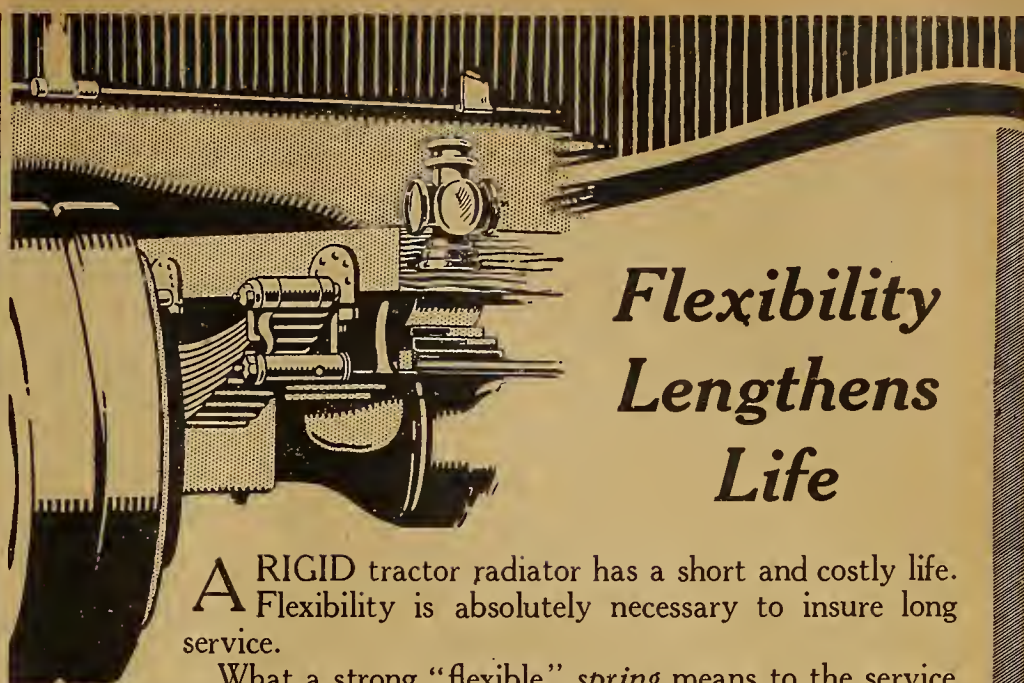
"I should want to be paid at least \$50,000 a year to be president of a brewery or a civil engineer. Because I hate beer and mathematics."

"But I write editorials at a few dollars less a year, because I love it."

"And, loving it, I know that I shall some day make a comfortable living."

"For there is a competency for any man in any job in the world into which he can put his whole self enthusiastically."

"He did it with all his heart," says the Bible, "and prospered."



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The Next Five Years—and You

By William Almon Wolff

THE war against Germany has been won. The war against famine is still going on. It is *your* war, Mr. American Farmer, to win or to lose. Peace, which means plenty, is not even in sight in that war.

We Americans played a part, more or less decisive, in beating Germany. It's not for us to measure what we did. But in the war against famine we are a major belligerent. Famine has allies, as Germany had. Bolshevism, anarchy, chaos, disorder—all lurk behind famine, waiting to profit by hunger's victory. We Americans have got to beat them. And in the war against them our commander in chief is Herbert Hoover. Our allies will fight under his leadership just as we and all the allies fought against Germany under Marshal Foch. You farmers, who till the soil and feed the herds that thrive upon it, are Hoover's shock troops.

It isn't easy to realize what a tremendous task you have on your hands. It's hard to be prosperous and well fed in Nebraska or Iowa and picture people starving to death in Russia. But that's what you have to do. You have to realize that a thousand bushels of corn that you *might* grow, and *don't*, may affect history. That corn means hogs. And hogs mean fats that take up as little room as anything possibly can in ships. And those fats, getting across the seas to Europe, may arrive just in time to save the lives of starving babies and underfed women. And the fathers of those children, the husbands and brothers of those women, seeing them restored, may resolve to work on at their trades instead of raising the red flag of Bolshevism and so helping to plunge some new city or province into the pit of anarchy.

Those people over in Europe aren't dealing in theories, you know. Politics for them doesn't mean discussions in a crossroads store, editorials in a newspaper, depressions because Bill Jones was beaten for Congress, elation because Hank Robinson has been sent back to the state senate.

They're *hungry*. Millions of them are hungry. They wake up hungry every morning. They can't sleep at night because the hunger pains won't let them rest. Children waste away and die. In Poland you can't find a child under seven years old alive to-day! Life tries to go on. It struggles against every handicap, every severity. Women bear children, undergo the agony of giving birth to dead babies, babies born dead because they starved to death before ever they were born!

The leaders these people listen to don't promise them a new post-office. They tell them that if they are put in power there will be food for all. If you were starving, if your babies were born dead, if your wives were wasting away before your eyes, wouldn't you turn to follow almost any man who offered you relief? Would you be



Photograph from Paul Thompson

we produce. We import some food—some sugar, even a good deal. Some vegetable fats we bring in. But we are a food-exporting country. We wouldn't starve, we wouldn't even be moderately uncomfortable, if we didn't import any food at all.

But in northern Russia, this winter, there are nearly fifty million people who can't import food. There is no way in which food can be sent to them. Their ports are blocked by ice. Four years of war, with anarchy following war, have destroyed or made useless their railways and their means of internal communication. Even the food they have produced themselves can't be evenly divided. There are peasant communities in that region that could have spared food for the cities. But so complete is the moral break-down of those people that grain has been burned and hidden to keep it from starving laborers in towns.

Before next summer, from fifteen to twenty million of those people will have starved to death. These aren't the sensational figures of some yellow newspaper: they are the estimates, based on verified statistics, of the United States Food Administration. Hoover has checked and accepted them. Hoover is in Europe now, doing his best for all the hungry people in the world. But, so far as those people in northern Russia are concerned, he is as helpless and as desperate as a railway official who knows that two trains are going to meet in head-on collision, and whose only course is to order wrecking crews and doctors to the scene of the coming catastrophe. Nothing can be done. Peace came too late to save those hungry Russians.

But it has come in time to save

other hungry millions. Before the armistice was signed all your added production of food, all the saving that you and the consumers of America did at Hoover's behest, went toward making up the deficiencies in the food supply of about 120,000,000 people in Britain, France, Italy, Belgium, and the districts of northern France that were occupied by the Germans. The iron ring of the Teuton armies made it impossible for us to reach Serbia, Rumania, Armenia, Poland, the Ukraine, and

The World is at the Front Door. Let It In

WHEN Wolff was in Washington on this story, Tom Ellis of the Food Administration told him he would like to see a world consciousness grow up on American farms. He hoped that farm men and women would realize that they have something in common with folks across the sea they never have seen.

Ellis is right. We've been too much like the farmer who barricades himself in his warm house and leaves his stock unprotected in the field when the blizzard comes.

The world has had a blizzard. And though it eased up a bit with the signing of the armistice, it is still raging in some form in many parts of the

world. Its worst form is hunger. The peasant women you see in the picture are three of the forty-five million Ukrainian folk who face this blizzard of starvation because food can't be got to them. Hoover estimates that between fifteen and twenty million of them will starve to death before spring, despite all we can do. And there are other hungry millions elsewhere in Europe.

Starvation breeds anarchy. America's fields and America's farmers are the strongest weapon the world has with which to fight starvation. For the next five years the bulk of world food production is up to us. And we'll not keep the door closed in the face of that. No, sir!

THE EDITOR.

in a mood to analyze his promises, to apply the tests of economic soundness to what he said?

When I was gathering the facts for this article I went to Washington to see the officials of the United States Food Administration. I talked to Tom Ellis, the man who has at his fingers' ends more truths about food supplies and food needs all over the world than any man in America.

"Naturally," I said, "peace doesn't mean the end of food control?"

"The end?" he repeated. "It's 'almost the beginning! I hope men and women in Nebraska and Kansas and Illinois are going to realize that they have an intimate, immediate concern with the affairs of people

they've never seen or heard of in Poland and the Ukraine. Our American boys have been dying because of things that have been happening for years in Europe without attracting any notice from us. And unless America pours out such a wealth of food as she never has before, the world is facing horrors even worse than any it has known between 1914 and the present."

It's no impossible task that you face. It involves no sacrifices for you. It does involve hard work, and thought, and co-operation with the men in Washington who have the facts of the situation all over the world in hand.

In America, of course, we always produce a surplus of food. We never consume all

other friendly countries and districts.

The iron ring is broken at last. And now we have to take care of 300,000,000 people instead of 120,000,000. That does not include any of the enemy peoples. We shall, unless we want to see anarchy among them, have to give those enemy peoples some help.

We carried our western allies through to victory. We gave them enough food, from our plenty, between April, 1917, and last November, to enable them to stay in the war. Meatless and wheatless days, a sugar ration, months in which we ate no bacon, war bread—all those things that Hoover brought into American life helped the war-worn nations that were fighting with us to win through. [CONTINUED ON PAGE 26]

Is Your Poultry Paying You Enough?

The story of a successful poultryman and general farmer who believes a lot of folks are passing up a golden opportunity in the chicken yard

By C. A. Rogers

LOOKING back over four years' experience as a practical poultryman, I do not see that I have done anything that any other man or woman cannot do, if the decision to go about it in a businesslike way is taken and adhered to.

Many farmers—too many, in fact—look on the chicken end of the place as a very small money-maker which had best be turned over to the women-folks for pin-money. And the women, it seems to me, are too willing to accept this view and make the chicken yard a side line instead of an important part of the farm.

My wife and I share and share alike on everything the farm produces, and while we are general farmers along with our chicken-raising, we find that by studying and systematizing the chicken end of the business it can be made to produce its very substantial share of the entire farm income. In recent years we have gone in more heavily for chickens; therefore they now produce the bulk of our income; but doing that was merely a matter of choice, not of necessity.

The point I am getting at is that there is nothing mysterious nor secret about the building of a successful chicken business on any farm. It is merely a matter of going about it in a businesslike fashion, just like you go about your other farm affairs. Failure to do this, I think, is responsible for the chicken end of so many farms not amounting to any more than it does. Poultrymen and poultrywomen are not born—they are made, and made just as any other successful man or woman is made, by hard work and common sense.

To me there are two things that make possible the success of any individual, whether he be doctor, lawyer, or farmer. These are a thorough knowledge of the business in which he is engaged, and a liberal application of common sense to that business. The two are inseparable. One is of little value without the other.

No great amount of capital is needed in the chicken business. It is necessary only that what capital is invested be directed in the right way. Many persons fail at it because they don't put enough time and energy into it.

When I went to college, courses in poultry husbandry held the most interest for me, and I applied myself along that line. After I graduated I remained with the college as an instructor for eight years, during which time I, of course, had all the advantages of carrying out experiments and tests which gave me a still better insight into the game and the great possibilities it contained.

I had always planned to start out for myself, so that I could apply the knowledge I had acquired; and in the spring of 1914 the opportunity came. My father was getting along, not in mind, but in body—and the farm work was too much for him, so I bought the place and moved on at once. He had at the time about a thousand Leghorns, so I bought these also, to be used as the foundation of my future operations. They were very well bred—in fact, were all of a high-producing strain, all displaying broad backs, depth to abdomen, and bodies carried well above the ground. In my opinion, these characteristics, combined with a long body, a large, fine comb, and an intelligent eye, are better than trap-nest records.

The farm and the poultry are each run as a separate business. Naturally I raise many things on the farm which are fed to the chickens, but the farm is credited and the poultry charged with its value. The farm supplies all my green winter feed,

such as cabbage and beets, and I also allow plenty of range for the flock, which is very essential. Oftentimes the produce raised on the farm is not suitable for feed, so I sell it, credit the farm for that amount, and buy the necessary mill feeds, charging it up to chicken expense. In this way I know where I stand at all times, whether I am making or losing money, and, if I am losing, just where to charge the loss.

My hatching is done with two incubators, each of 4,800-egg capacity, and by using care and common-sense my results are satisfactory. I might say here that too many poultry raisers expect big hatches.

Don't be discouraged if your hatching percentage should be low. One season my own hatches ran below 50 per cent chickens for all eggs set. This is an average of course, some hatches running much higher and some lower. I would say that the usual fertility is about 85 to 90 per cent.

The conditions of the last year or two have tended greatly to lessen the demand for breeding stock. I look for this end of the business to take a decided jump in the near future, but in the meantime I have been expending all my efforts toward

greater egg production, and believe the problem of winter laying has been solved. I knew that there was no excuse for a hen to go into winter quarters and simply suspend operations until early in the spring, all the while consuming feed, but giving nothing in return. It didn't seem right. What was necessary was more exercise and feed, and the ordinary daylight was short. Going to perch at five at night and not coming down until seven in the morning does not properly distribute her meals, nor allow a sufficient time for exercise; and if exercise is lacking, there is no great desire on the part of the hen to eat. If she doesn't eat, how can she lay eggs?

The answer to this difficulty is light. If there was no daylight, why not make daylight? Why not try electric light?

I had my plant installed at once, and tried it out for the first time last fall. The

I was getting but a few eggs a day from my hens. In six weeks' time, and on into the period of the year when egg production is lowest, I had increased my number to an average of 450 eggs per day from the same number of hens. At the time this is written I am getting 500 eggs a day, which is about a 25 per cent production for my flock, and expect at the present rate of increase to have them up to a 40 per cent production in two months. When you stop to consider that the average production for this time of year is only 15 per cent, the results I obtained are astonishing.

Chickens are creatures of habit, just like any other animal. To have things run smoothly, all things incidental to their care should be done as nearly as possible at the same time every day. In using the lights, I have tried to adhere strictly to this rule. Here is my order of procedure: By an automatic time switch the lights go on in all the houses at five o'clock in the morning; at six I feed, and the lights remain on until daylight. At noon I gather the eggs, and in the winter feed cabbage, beets, or other green food.

At seven-thirty in the evening the lights go on again. The hens have by this time gone to perch, but when I go out to feed at eight they are all down and ready to eat. The lights remain on until nine, at which time they go off for the night.

The plan didn't work right from the start, I admit. It took about two weeks for the hens to become accustomed to the new order of things, but now when I go out to feed they are everyone of them down and scratching around as if it were broad daylight, getting all that extra feed and exercise.

The first question you would naturally ask is, "Does it pay?" My answer is, "Yes, many times over." The first

hen is laying she is profitable, regardless of the price of feed. But just as soon as she stops laying she will lose you money. She is taking from you and giving nothing in return. Therefore it's up to you to keep her on the job, and electric lights will do it.

When I changed to lights, my time of feeding was also changed, but the feed itself remained about the same. Barley and ground corn form the largest part of my grain ration in winter. I figure from

six to seven quarts of feed to each one hundred hens per day. This ration is for the pullets and older chickens. The little chicks are fed some reliable commercial mash feed until they are about six to ten weeks old, at which time they get the same as the others.

Some kind of fresh green feed is also very important. I have found that cabbage makes a good feed up until Christmas, after which I use beets for the rest of the winter. This sort of food keeps the fowls in good physical condition, and makes strong-shelled eggs. I have heard some talk of feeding ensilage to hens, but I do not believe it would be

practical. They really need something more succulent, and the ordinary ensilage is too hard and tough.

It is on my food hoppers, however, that I pin my faith. Every bird in my flock has free access to these hoppers, which are built on the order of self-feeders. In them I feed a dry mash which is mixed as follows: 300 pounds of cornmeal, 300 pounds of wheat bran, 300 pounds of wheat middlings, 300 pounds of ground barley, 300 pounds of ground oats, 400 pounds of meat scrap, 50 pounds of oilmeal, 50 pounds of gluten meal, and 20 pounds of salt. This is all mixed dry and put into the hoppers. I consider this mash mixture very necessary to big egg production, as it is high in protein content, and protein makes up a large part of every egg. If the hen is expected to turn out eggs, she must have plenty of fuel to work with.

While the egg contains a large proportion of protein, it contains a larger portion of just plain water. You can put all the feed into your chickens you have a mind to, but if you don't give them plenty of water it is feed wasted. I keep water before them at all times; not stale water, but fresh running water. I use for this purpose long troughs which are elevated at least a foot off the ground to prevent the scratching of filth and straw into them. The water level is regulated by a float in each trough, which keeps the level constant at all times; and you would be surprised how much they drink. There seems to be a line-up at the troughs all the time.

Whatever you do, never try to economize by feeding damaged food. I had a peculiar experience along this line which other poultry raisers might profit by. At the time in question I had a quantity of wheat bran on hand which started to mat. It was not in very bad shape—just a trifle heated. While I knew it was in that condition, I had no idea it would be unfit for feed. I mixed it in my mash ration as usual, and fed it. In several days my egg production started to fall off. I could not account for it, but supposed it was just temporary and would soon be back to normal. About this time I happened to run out of other feed, so mixed up a double portion of the spoiled bran. In a day or two many hens in my flock were sick, and egg production [CONTINUED ON PAGE 46]



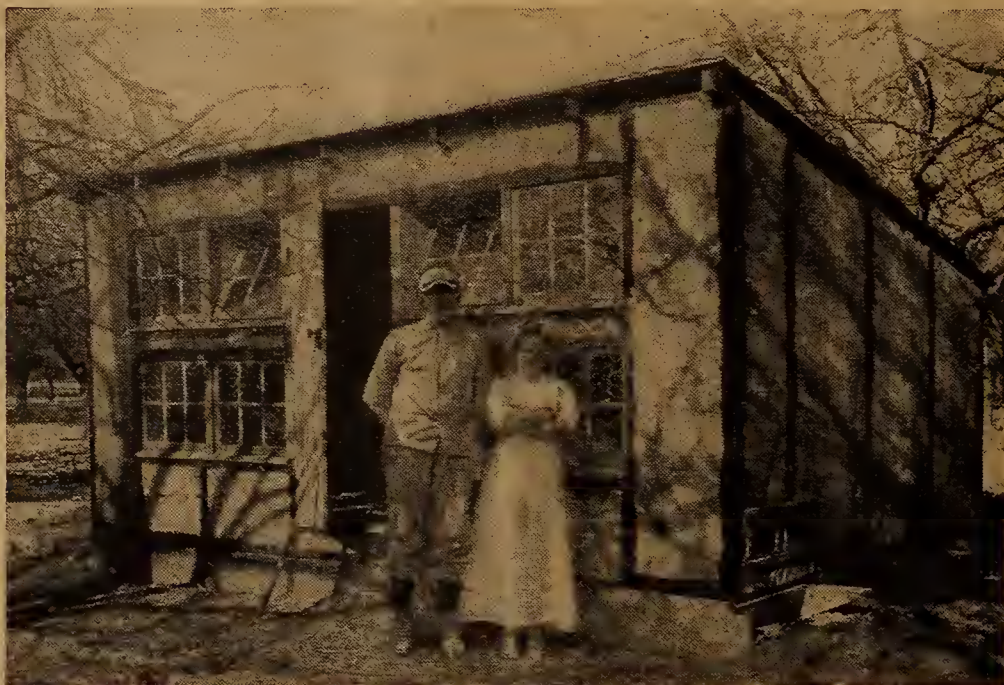
Mr. Rogers the younger

Success is No Walkaway

JUST as we were going to press with this article, we got a letter from Rogers at his farm up near Bergen, New York. He was worried for fear his story would make the prospects seem "a little better, or a little bigger, or a little brighter than they really are."

He doesn't want anyone to get the idea that running a chicken farm is easy, or that success comes with little effort. And he's right. Success is no walkaway, in the chicken business or in any other business. So don't expect to make the chickens pay you overnight if you start in with them. But if you have the determination to succeed, Rogers' experience proves that the business is well worth trying.

THE EDITOR.



Mr. and Mrs. Rogers at the farm

result has been astonishing, to say the least. There will undoubtedly be a few who will find the statements I am going to make rather hard to believe. To all those I say, Come and see! The lights were first turned on about October 1st. At this time

month's increased egg production paid for the lighting plant and its installation complete. So I would say that it paid very well indeed.

Right along this line there is another important thing to remember: While a

The Truth About the Trenches

By Jean Babtiste Zacharie

DURING the four years I was at the front I spent two furloughs with my wife and child "back home" in New York. In France I had lived for weeks at a time in dugouts and tunnels underground; in cold and darkness, half starved, and covered with vermin. For months I lived in the trenches.

Then I came back to America; and that was one of the strangest experiences of the whole war.

Here you can walk about in the open. You can see wide meadows and houses and trees. Even in the cities you can look about you, up and down the streets, away into the distance. You have no idea what it means to be huddled, day and night, between two muddy walls, so close to you that your shoulders rub against them as you pass.

There is nothing but a stretch of blue overhead when it is clear, or of gray when it rains. At night there is only an avenue of stars or a black curtain with lurid reflections of gunfire. There in the trenches all existence seemed narrowed down to a ditch in the mud.

Coming back to the United States was like entering another world. And it may sound strange to you, but it was the life which you lead here at home that seemed unreal, not that which I had been living at the front.

New York—stupendous, palpitating, teeming with people—was like a dream. The trenches and dugouts—the solemn and awful desolation of No Man's Land—these were the Great Reality. I felt as if New York was something ephemeral, an iridescent bubble which had no part in the grim business of time existence.

When I went back to France it was like getting out of a fog—beautiful, rainbow, to be sure; but a fog nevertheless. On the battle front the soul breathed a keen and bitter air; but it was clear; and for all its sting, it was like a tonic to the spirit.

I know that you at home pity the men who have been at the front. And if you are thinking only of their bodies they deserve your pity, more than you can ever realize. But do you know that they, for their part, have been pitying you? They looked back with a strange mingling of longing and repulsion to the comfortable life here at home. They wanted to return to it when their task was finished. But I very much doubt if any one of them would give up the experience he has had over there. The war can never mean to you what it does to the men who have been in it.

In the first place, they have learned both to despise and to prize comfort. To be hungry and thirsty and sleepless, cold and wet, ragged and even filthy, so far as the body is concerned, is so transitory and unimportant a thing compared with actual life and death. Millions of men and boys whom we had thought careless and commonplace have proved that bodily comfort is nothing to them compared with a satisfied mind and spirit at peace with itself. I don't think this can be said too often. It is the true glory of the trenches.

On the other hand, we have learned there to appreciate so keenly the little everyday comforts which you take, as we once took them, without a thought of gratitude. Now

they seem so wonderful and precious to us. Just mere ease of body—even common cleanliness. It is going to enrich normal living for us when we can come back to it. But we shall know these things for what they really are—the ornaments of the fabric of existence, not the fabric itself.

This is one great change which war has brought; that what we once called "ideals" are now recognized as the true "realities." Take, for example, one of my own experiences:

I have been, as I said, four years at the front. But there was one single day in those four years which seemed ten years long. I have done forced marches of many kilometers, carrying my equipment and a heavy pack. But none of them—no, not all of them together!—could be compared, in difficulty and danger, with one journey I made, only two short miles in length, when all that I carried was a piece of bread, a canteen of water, and a slip of paper. It took me more than nine hours to cover those two miles.

I have been under fire for weeks at a stretch. But this time, in the space of those nine hours, certainly ten thousand shells and bullets were fired at a single companion and myself. I escaped them all. But my companion paid the toll with his life.

I do not need to consult my notebook for the date of that experience. The second of June, 1916, is a day I shall never forget. It was at Verdun, where we had been for about two weeks.

Two weeks of mud up to our knees, for it rained constantly. We had almost nothing to eat but black bread. What little sleep we had was in a tunnel, on the bare floor, which was so cold that we were always chilled to the bone.

Most of the time it was pitch dark in there; for, although it was wired for electric light, we had to economize in the use of current, and it was turned on for only a

In the French Army, except in the case of special undertakings, you are not asked if you can do a thing or if you want to do it; you are told that you must do it. The first night after I reached Tavannes they told me I was to act as guide for the relief parties to Vaux. That night a man went with me to show me the route. I had to learn it that one time and do it by myself after that.

There were no trenches, no road, to be followed. For landmarks I had corpses, dead horses, abandoned rifles, and so on. Every night I crossed this Valley of Death twice. And every night, on an average, twelve of the men I guided were killed.

The Germans had succeeded in reaching Fort de Vaux from the east, and had actually penetrated the fort itself, so that they were occupying part of it, while we held the rest. It is in the crest of a hill, and is about as large as a New York City block. The Germans had even installed machine guns on top, while we were in the galleries right under them. With explosives we might have blown them up; but by this time we did not have any. Even ammunition was very short, and there was almost no food.

Finally, on the morning of the second of June, the situation became desperate. All telephone wires had been broken and our last pigeon at Tavannes had been killed. And yet it was necessary to get a message to the little remnant of men still holding Vaux. The only way was to send it by runner, in broad daylight. The undertaking was almost hopeless—one of those missions of special danger which form the exception to the rule of being told that you must do a thing. So the officer at Tavannes asked for volunteers. And two of us, both corporals, responded.

Before the war that little valley had been a place of beauty, its sides covered with trees and grass and flowers. Now it was absolutely ravaged by shot and shell. Not even a shattered tree trunk was standing. Exploding shells would set fire to fragments of wood in the debris, so that at night there were little lurid flames all through it.

The shell holes, of which there were hundreds, made possible the attempt to cross it in daylight, for they did offer a chance of shelter. But the bombardment was so furious that my companion and I had to lie hidden, each in his shell hole, a long time before we could attempt to reach the next one, only a few feet away. Of course we were not together. I went

first and he followed, about a hundred yards behind me, so that both of us would not be killed by the same shell.

It took me three hours to go the first quarter of a mile. The Germans at Verdun were incredibly reckless in their expenditure of ammunition. It seemed as if they would use a thousand shells to get one man. When they saw us attempting to reach Vaux in daylight they realized, of course, that we must be carrying an important message. And therefore they were the more anxious and determined to get us.

At one o'clock my companion was killed. I had kept track of him by occasional glimpses as he crawled or jumped from one shell hole to another. But finally these glimpses ceased, and I knew he must have been hit. If that was the case it was my duty to find his body and secure the duplicate dispatch he was carrying, for I must, if possible, prevent its falling into the hands of the enemy.

So I crawled back and hunted for some time, but I could not find any trace of him. Probably he was buried by an exploding shell. So I had to give it up and go on.

The going was a little better after a while, especially when I reached a point near the crest, which was so situated that the shells passed quite over me before exploding. I knew this sheltered spot very well, and when I finally rolled into it and lay there, looking up at the sky, the temptation to stay, at least until dark, was almost irresistible. Once out of that refuge, I should be under heavy fire again; and no bed in the world ever seemed so heavenly to me as that muddy bit of ground did then. I crawled on, however, after a little rest; and at five-thirty in the afternoon I succeeded in entering the fort safely.

But the adventure was not over yet by any means. Before dark the Germans had brought up more machine guns with which they covered every entrance to the fort, so that it was impossible for us to leave that night, as we had planned. For four days we remained inside a part of the fort, doing our best to hold off the Germans, who attacked with machine guns, hand grenades, and asphyxiating gas. At the end of that time we had been reduced to only twenty-six men. We had been without food and water for some time, and now our ammunition was all gone. So we determined to try to escape by digging through the wall.

As I said before, the Germans were actually above us. And as a wall is an excellent carrier of sound it was impossible to keep them in ignorance of what we were doing. But we worked, anyhow, and by that night, June 6th, we had made an opening through which a man could pass. He must, however, jump from this breach into a ditch about fourteen feet deep before he could even try to get away.

When everything was ready the major in command gave us our choice of surrendering or of trying to escape. Seven chose to stay. They were so weak that the undertaking, a desperate one even for strong men, was impossible for them. The rest of us drew lots as to the order in which we should go. I was the eighth one.

At eleven-thirty that night the major gave the signal, and the first man jumped. He was probably killed. One by one the next six followed him, and every one of them was killed. I think perhaps they were just tall enough to be caught by the fire of the machine guns above the wall. At any rate, not one of them escaped, while I, who am rather short, was not hit.

[CONTINUED ON PAGE 42]



Zacharie at the front with his gun crew in 1915. He is the one leaning against the breech of the gun

The College of Mudholes Turns Out Some Fine Men

THEY called them the trenches of France. But they were mudholes. Just mudholes. And yet, in their narrow, sodden confines, our great contribution of young, eager American boys went to school—to the strictest, the hardest educational institution ever built, the University of the Trenches.

School is over, and the boys are doing a little post-graduate work along the German border. But they will all be home one of these days, and when they come brace yourself for some surprises.

Their views of life will be bigger, broader, stronger, manlier, than when they went away. Their battle lessons will have taught them things they might never have learned at home. Don't be astonished at the changes in them. Remember that they have studied Life and Death in the raw, and have taken their degrees.

home to us the greater things of the spirit—things they have learned through suffering and sacrifice borne with high courage. When we think of them in that way, even our pity of them is less than our humility for ourselves. THE EDITOR.



The man with the dog is Zacharie. They lived in the hen house before which you see them in the picture

few minutes every two hours. I was at Verdun thirty days. And in all that time I never had my clothes off, never had water to wash with, never had anything warm to eat or to drink. I was covered with vermin and was half starved.

My company was in Fort Tavannes, which was separated from Fort de Vaux by a narrow valley that had been christened the "Valley of Death." Almost every yard of it was under German fire, and yet that valley had to be crossed to send relief to Vaux. Every night one platoon went in and another came back.

The Man With a Limp

Who shows that the brand of the beast is even on those who serve it, and that the world has done well to wipe it out

By Chester L. Lyman

THEY probably walk that way—each in his own way—because it pleases them to do so.” That was the first remark Gus Minch had made for some time—the first, in fact, since the one made at the very beginning of the parade.

Gus Minch had been the first, I think, to realize or comprehend the tensiety of the voiceless crowd down there below us in the canyon-like depths of Broadway. He had been the last to get to the window, as he was always, by reason of his peculiar shuffling gait, the last to get anywhere. But it had taken him only a moment to sense that striven timbre peculiar to the humming murmur that rose from the throng on the sidewalk.

Usually such crowds watched parades and listened to the blare of their martial music with all the irresponsible joy of grown-up children; but this day they had gathered to wave Godspeed to the first contingent of the new National Army—the “Liberty Boys” some happy phrase maker had christened them.

“Ah!” Minch exclaimed, as if in a burst of sympathy with all those hopes and fears beneath us. “Now it begins to get under the skin!”

That was the truth. The crowd had come a-holidaying, but the never-ending line of marching olive-drab had sobered it. The understanding of what this parade meant, ever deepening and clearing, was getting “under the skin”—under my own skin as well, and under the skins of the other men in the room.

Now and then someone commented on a detail of the passing line. Perhaps a platoon maintained only a very ragged front. Such a one called for a laugh from Reynolds. He was captain of the drill team of his lodge, and had any number of silver cups to prove that he was a first-class drill sergeant.

Once a particularly awkward private knocked his own hat off, and disturbed the composure of an entire company in the recovery of it.

“Fine, fine!” chuckled old Willoughby, who had been through the Civil War. “I hate machinery.”

At the end of the parade, marching four abreast, came the young men who had just been called to the army. The crowds, which before had been content to stay penned back on the sidewalk, now swayed forward from each side toward the center of the street. Each person, it seemed, had in mind to see and wave to some man in that long, straggling, ill-formed line—to let him know that he was not forgotten.

The swaying pressure of those crowds, like the motherly sweep of two protecting arms, had brought my heart into my throat. I felt—I felt—well, I was glad that this was my country.

Perhaps it was because I was in this frame of mind that Reynolds’ next remark jarred me the more: “They’re just as graceful as if they were following a plow.” I turned to make some sharp answer, but Gus Minch was before me with that remark of his:

“They probably walk that way—and each in his own way—because it pleases them to do so.”

He said it in a matter-of-fact way; but, for some unexplainable reason, I could not take it as a matter-of-fact statement. It was true enough, but trite. It was as if one had said of a man that he ate food to satisfy his hunger. Evidently, though, Minch had no intention to add to the remark. His eyes followed intently that weaving, straggling line of men down there in the middle of the street.

Here and there Reynolds spied a marcher with whom he was satisfied, and each time he would point the man out and exclaim:

“Look at that one, just behind the banner, just next to the tall man with the round shoulders; there is a soldier—every inch of him!”

The man he thus indicated would be easily distinguished from those near him. He walked erect. Except for the want of a uniform, he was in every respect soldierly. His step was in time with the thump of the drums. His eyes bore straight ahead. His arms swung only the allowed three inches.

I remember one such prodigy in the world of go-as-you-please—remember not the man himself so much as Reynolds’ delight in the mere sight of him.

“There is a soldier,” Reynolds breathed. “Once a man is a soldier, he will carry the mark all his life. It is wonderful. ‘Look at Minch,’ he continued, still dwelling on that idea. ‘He walks like a ninety-year-old camel; his shoulders are round; one arm swings farther than the other; his right foot drags; and he has the spring-halt in his left hip. That is the way they train a man to be the image of God in America! If Gus Minch had been born in—Germany, for example, they would have given him three years of military training, and made a man out of him, instead of just a clumsy human two-armed derrick!’”

The remark was made in good nature, just as a part of the office badinage that

you have mentioned? Believe me, there is a reason! I am from Germany—born in Bavaria—and I have served my three years in the German army.”

He paused for just a short moment, and then burst out passionately;

“But I am not so sure as you, Reynolds, that the image of God looks best doing the goose-step!”

A sudden chilling gust of distrust swept through the room. Minch could not be unconscious of it, and when he spoke again it was with a sort of groping hesitance:

“I have never thought to make a secret of the matter, or to conceal it. I have been in America since fourteen years ago. Through all that time I have striven to make myself an American in word and thought—and to forget that I was ever anything else.” He hesitated, as if doubtful whether or not to speak on; then he turned and, back to his bench, next my own. One by one the others went about their work in the various parts of the laboratory.

I could not forget the shadow of pain that darkened and contorted Minch’s face at that instant when Reynolds had spoken of Germany and the German army. Back of those fourteen American years must lie a bitter remembrance. I thought of his rounded shoulders, one higher than the

other; of his right foot that dragged; of the limply held left hip; and it seemed to me that his recollections might well be bitter. I whispered a word of friendliness and went on about my work.

Minch needed only that bit of sympathy. Piece by piece, a word to-day and a word to-morrow, he told the story while he worked there beside me at the bench.

IT WAS the common sort of story that one so seldom hears, probably because it was about very common people—just people, privates in a big army. Generally when an army is spoken of, one thinks of

officers and gold braid and shiny swords. The privates are a mass that does not resolve itself into individual men. August Minch had been one of the privates, the son of a small farmer up in the Bavarian Alps.

“We all knew, my mother, my father, myself—every one knew—that when the year came for my class to be called up I too must go to the army. From the time I was born it had been known; so, too, as to all the others. We were labeled in the cradle. I grew up strong and healthy. That left no escape. But how we hated that army! Others had gone from our neighborhood, and returned, men whom we knew. They had come back stiff and erect—and broken, broken inside. We had heard from them everything about the army. We knew.

“I myself was buoyed up with excitement of going into new places, of mingling with strange people. I was drunk with the foretaste of new impressions. I forgot what those others had told me of that army.

“The road that led from our little plot of hillside land to the valley below wound around this way and that as it took its slow, devious way downward. One moment our old cottage would be in sight; the next, a curve in the road would have hidden it. Each time it was in sight, I waved good-by after good-by. With a last possible shout I promised my mother, who stood outside the door, that she would see me on my first furlough. I never saw her again.”

Minch said no more that day. He bent more earnestly over his work. His hands, usually so quick and certain and steady, trembled. I could see it when he lifted a beaker of water, or the like, to look at it through the light.

The record of those three years in the German army, as he told it, was not a startling one. There were few highlights. He had not spent months in prisons. He had not suffered punishment for disobedience, nor been the victim of brutality more than was the experience common to all men in the ranks. He had been one in a million.

Halzberg was the headquarters of the army corps to which he had been ordered to report. There, in a large room of the very old headquarters building, he had his first experience of the army. The room itself was furnished with every regard for military precision. Endless desks extended down one side of it—the dark side, Minch noted. Clerks sat at these desks and worked—military clerks. On the other side, next the windows and the light, were only two desks, where sat the sergeants in charge of the office. Between was a large open space.

He and a crowd of boys who were in his same predicament had been herded into this room as if they had been so many cattle, and had been left there, uncertain what they should do or what was to be done to them.

Through the windows he could see the green trees bending gently to the light breeze. Involuntarily, he said, and without thought of unpleasant consequences, he drew toward the

open windows to get closer to this freshness, to hear and to watch the birds, which were so gay in their careless freedom.

There is such a thing as an anxious silence. The silence of a crowd, breathless and agonized while it awaits some appalling catastrophe, is such silence, and it can be felt. It can be realized where a shout might go unheeded. In the midst of his enjoyment of the view through the windows, Minch became conscious of the ominous and anxious silence about him. His heart constricted, and he turned slowly and bodingly from the window.

“Dummkopf!” [CONTINUED ON PAGE 58]

Cruelty Isn't Dead Yet

WHEN you read this story do not waste all your hatred of cruelty on this Prussian drill sergeant. There are men in various parts of the world, driving horses, or rearing children, or bossing men, who are Prussian drill sergeants at heart. Not many, but some. And if we could work up a good, healthy hate against them, and direct it toward specific action, much of their meanness could be wiped out.

THE EDITOR.



Gus Minch was the first to realize the tensiety of the voiceless crowd down there below us in the canyon-like depths of Broadway

was always going about. Reynolds himself was smiling when he said it, and others of us were about to laugh at Minch’s expense, when we noticed about his lips an odd expression of strain. Our laughs died aborning as Minch began to speak slowly and, it seemed, almost painfully:

“You talk with certainty, Mr. Reynolds, of things you know nothing about.” He paused at this point to search carefully for just the right word to express his thought. “You say that I am—ungainly and awkward and all the rest. How do you know that there is not a reason for it—for each one of those details of maladroitness which

other; of his right foot that dragged; of the limply held left hip; and it seemed to me that his recollections might well be bitter. I whispered a word of friendliness and went on about my work.

Minch needed only that bit of sympathy. Piece by piece, a word to-day and a word to-morrow, he told the story while he worked there beside me at the bench.

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"Why My Tractor Has Come to Stay"

A successful Scotchman with a big farm in Illinois finds his iron horse a practical saver of time, men, money, acreage and teams

By Mark McClure

(In an Interview)

MARK MCCLURE is the kind of a man who doesn't believe in killing himself to make a dollar. He would rather think a bit and make two dollars. Out around Manhattan, Illinois, where he has his farm within half a mile of the place he was born, they look on McClure as a man who thinks and acts straight to the point. He's about forty, tall, spare, and every inch a broad-gauge business man. He knows what's going on in the world around him, and he knows how to pick out the new developments he needs, and turn them to good account. There ought to be a lot more like him.

THE EDITOR.

THE tractor itself is such an important step toward bigger

and better things in agriculture, and there is so much misunderstanding, not unmixed with prejudice, about it, that I believe it is to the interest of all farmers for some practical man of the soil to come forward with his actual tractor experience.

Without doubt there are many men better fitted to do this than I am, but my experience has been practical and I have been farming for many years in as systematic and business-like a way as I know how, so perhaps I am not in so poor a position to understand the farmer's viewpoint in the matter of tractors as I might be.

As nearly as I can get at it, this is going to be the absolute truth about the tractor as I have come to know it, with some information for those who haven't been interested enough to investigate its merits, and also some points that I hope the tractor people will not ignore.

But let me say right now, as strongly as I can say it, that the tractor has come to stay on my farm, because it is a practical success. It was bought as a matter of economy—forced economy, you might say, because of the labor situation. But it is a good investment anyhow, we find, shortage or no shortage. In the last two years my tractor has enabled me to eliminate a third of my men and 40 per cent of my horses. Not only that, but it made possible the cropping for 40 more acres than I had been cropping, and increased my personal efficiency from 50 to 100 per cent.

Of course I am in no position to judge accurately the adaptability of the tractor to other farms over the country, but I would say offhand that any tractor that stood up under the hammering we give it, and the conditions we confront it with, ought to do almost anything in its line on any farm anywhere. In spite of the fact that we have not spared our machine, and have made it do every conceivable kind of work without any unusual amount of care and attention, it has stood up mighty well for twenty-four months, and is good for at least two years more, possibly longer.

Still, you may have noticed that I said 40 per cent of my horses had been eliminated by the tractor. The others I still have, and am going to keep. An all-power farm may be practicable if it is small. I don't know. But it has been my experience that on a place of 250 to 300 acres or more, such as we have in the country east and west of the range, there are several reasons for keeping some horses on hand. Even if I had a tractor which would do all the work, unless I had two or three machines and plenty of repairs, or repairs were readily accessible, I would keep a limited number of horses.

But that is no argument against the tractor. When the tractor people get their service stations organized throughout the country as efficiently as the automobile

people have got theirs, I can see where the tractor might serve a much greater proportion of farm needs than it serves to-day. Meantime the tractor has a very definite place on my farm, anyhow.

I have 280 acres, 245 of which are cultivated and cropped each year. There is one man and myself as man power, a tractor, and eight horses as a means of doing the work. Last year we used eight horses, but this year we plan to use only six.

I bought my tractor two years ago. In the first place, I did it because I wanted less help; but the principal reason was to get the work done on time. I am a grain farmer, having only a few hogs, which I use to husk part of my corn.

It is necessary, therefore, that my work be done on time, for a crop to be harvested will not wait; neither can we put off seeding very long.

My tractor pulls three bottoms. I expect it will be serviceable for two years longer at least, although it has been found that the average life of a tractor is eight years, using it on a basis of forty-five days a year. But we use ours pretty hard, because there is much for it to do, and we like its work.

In the fall and spring the tractor is especially valuable to me. We can do our seeding on time, with my man working the tractor and I behind him with a drill. To my mind the greatest value of the tractor lies in its speed in accomplishing things, rather than the economy of operation as compared with horse power.

However, during the last two years it has been my experience that a tractor is cheaper than horses, because of the high cost of grain for feeding. I never kept any accurate records as to the cost of operation with either kind of power, but I know for a fact that one man and a tractor can do from 50 to 100 per cent more work than the same man and a team of horses.

If on a given day I were to compare the cost of feeding a team and the cost of operating a tractor—that is, gas and oil—considering the amount and quality of work done by both units, the tractor would have a big balance in its favor.

In planting corn the tractor double-disks and drags the ground, while four horses attached to a planter will hardly keep up with the machine. Last spring I remember one day the man started a little ahead of me with the machine, getting the ground in shape, and he finished a good half-day ahead of me.

Take the working up of the fall wheat seed bed, for instance. The tractor plowed, disked four times, dragged, and rolled the

ground in good time. To do this work in the same time with horse and man power, I would have to have two men and two teams working a little faster than it is possible to drive horses which are being worked hard.

While I am enthusiastic over my tractor, I am not blind to the need of horses on the farm. I have had some experience along this line about which I will tell later. I hardly think it is possible to do without horses on the average corn-belt farm, which runs from 160 to 300 acres.

But while I have had some trouble with my tractor, I am not trying to depreciate the machine. One of my neighbors has had one of the same make for two years, and he has not had as much trouble as I have had. Perhaps the difference comes in operation. We don't have time to spare the machine, but at the same time we don't expect the impossible from it. Both my man and myself run the tractor. Experience is teaching us, and every day we learn something new about it. And knowing the machine is very important.

Without intending to boast, both of us are fairly efficient operators now; but we have found that in order to know a tractor and to operate it properly we must go over the machine from one end to the other, and learn the different parts, their function and adjustment.

After observing the different makes and types of tractors, I cannot help but think that the kind I have is the only real farm tractor, and that it will be regarded as such in the future. It doesn't pack the ground to any extent, and it will operate over soft ground as will other types and pull twice the load some other machines will pull.

The tractor is the main reason why I can get along with but one man. We use it for everything but plowing corn, all of

because we can work in the extreme heat, which is almost an impossibility with horses if you care anything for them.

Another thing: When we are cutting wheat or oats with the binder all we do is unhook the tractor in the field. We don't have to take it to the barn and feed it, as we did the horses, at noon or in the evening. It eliminates a lot of chores in this way. A man can come right in from the field at noon or night and go to his meal. That helps too, believe me.

In harvest time I have extra help, of course, but no man is used on the tractor who can work otherwise. Usually I have a boy on the tractor. I attach a rope to the clutch, so that if anything goes wrong I don't depend on the boy: I merely pull out the clutch.

With the tractor pulling the binder we can cut from 25 to 35 acres a day. This year we had 55 acres of wheat and barley which we had to cut in one way, because it lodged badly. The tractor made a nice job of it.

All in all, I find that the tractor is a mighty good thing; and as long as I do any farming I wouldn't be without one.

It appears to me that one big trouble with the tractor business is the lack of service. The auto manufacturers have it, and I don't see why the tractor makers cannot have the same thing. A farmer cannot afford to wait two weeks in the spring for a part of the tractor which has broken down. I believe that they are selling to capacity of tractors, and have not the time to devote to the service end of the business. This is an important part of the business, and I believe it should get more attention from the manufacturers.

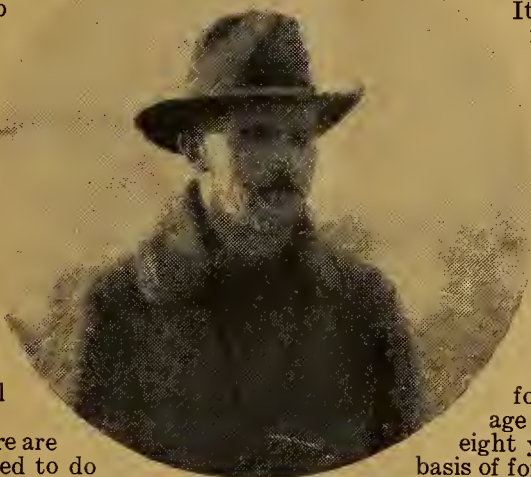
Buying a tractor is a ticklish proposition. The only thing they guaranteed on my

machine was the power, and this was tested thoroughly or the agent would have made no guarantee. I got no assurance that the machine would last a year or more; and the parts were not guaranteed at all. When you buy an automobile a year's guarantee usually goes with the machine, and you can have any broken parts replaced in that time.

My tractor troubles have been few, but were of a nature that more than covered a hundred trivial ailments. The trouble began when I had the machine but two days. The first thing that happened was the breaking of the end of the exhaust valve stem. I had a hard time replacing this gasket on the cylinder head. I couldn't get one from the company which made the machine that would hold any time. I got several myself and put them on, but they burned right through. Finally the experts from the factory came out and put one on, but it burned like the rest.

Then I bought a piece of sheet copper, and put that on. I haven't had any trouble since then with this part.

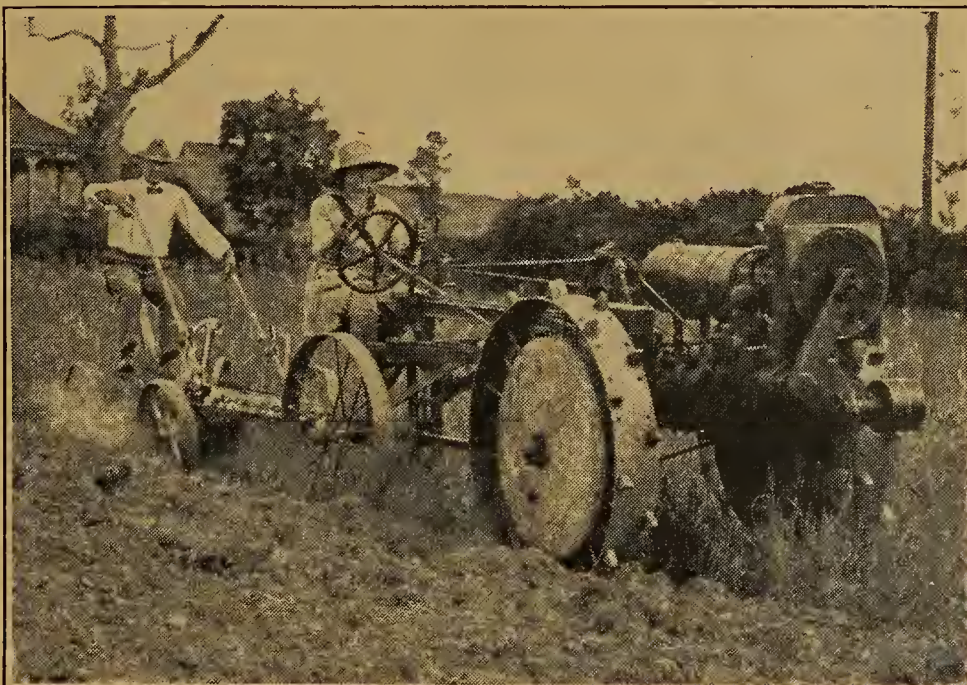
I experienced a whole lot of trouble in getting these gaskets replaced, and this experience helped [CONTINUED ON PAGE 34]



This is Mark McClure



His daughter Mabel, aged 14



Why Girl Farmers Like to Drive 'Em

HERE is one of the thousands of New York girls who joined the Woman's Land Army encamped at Millbrook, New York, and helped the farmers put over their victory crops during the war. Running a tractor was one of their favorite jobs, because, they said, it was like a well-trained husband: it got things done without arguing about them. You will also notice that the man in this picture is doing all the hard work. It's the old story of "ladies first," which this Miss says is as it should be.

our belt work being done with it too. I have a 12-foot binder to which I attach the tractor. When I used horse power for this work it required six horses to push it. I pull it with the tractor, and do the work just as well. The tractor is more efficient

Why Consumption Gets Country Folks

People who live on farms are just as apt to fall victims to it as anyone else if they don't take care of themselves

By John B. Huber, M. D.

THE doctor advises, in every case possible, that the sufferer from consumption shall be sent to the country, because the sunshine and the pure air, rest and nutritious food, offer the patient the best chance of recovery.

This course was deemed best even twenty centuries ago. Celsus, Nero's physician—the same Nero who fiddled when Rome burned—who wrote that if a man have a consumption the best thing for him to do is to buy a cow, take his purchase up to the top of a hill, and live on the fruit—that is, the milk. And, of course, the consumptive does stand the best chance of recovery under such healthful conditions.

Yet many natives of rural districts die of tuberculosis. The reason has puzzled many doctors. I for my part have got some pretty good light on the subject. When I was sixteen I taught school in a backwoods district, and "boarded round." This was for sixteen weeks, and in the summer-time, because the children could not get to school through the winter drifts. And it was very near the region where the most successful institution in America for the cure of consumption has since been established.

I recall that the food was very bad. Although a fair farming country and a very good dairy country, meats other than bacon were almost never seen during the summer. Most of the butter, milk, and eggs were sold in urban markets. What milk I got was weak, and I got it mostly with weaker tea. The food was poorly cooked, indigestible, and for the most part did me no good.

That was nearly forty years ago. Of course, so primitive a rural district is rarely come upon in our day. Even at that time, no doubt, my experience was unusual. Whether there are any such communities to-day I am not sure; yet, if there are, there need be no wonder if tuberculosis is rife in them.

There was much dyspepsia among those rural folk, who should have had the digestion of ostriches. And for the relief of it they took what seemed to them a harmless procedure—all sorts of stomach bitters, some brands of which contained as much alcohol as whisky does. Even people who held the drinking of whisky in abhorrence consumed doses out of bottles highly charged with alcohol, which were labeled "Take a tablespoonful to a wineglassful, or more as needed." How was this different from the whisky-drinking which all too often lays the foundation of consumption? Hard cider does the same thing.

Also, there had been in that region, through several generations, intermarriages between families living within a few miles of each other. And, say what we will, such marriages result oftentimes—though, let us thankfully observe, not always—in "poor stock," weakened, non-resistant bodies, which all too easily become good soil for the tuberculosis germ to thrive and multiply in.

Such things explain how many of our country folk contract tuberculosis; why, also, many do not get well of this disease, but die of it in the country. We may indeed observe with Doctor Oliver Wendell Holmes:

God lent his creatures light and air,
And water open to the skies;
Man locks him in his stifling lair,
And wonders why his brother dies.

About thirty years ago, when the erection of a sanatorium for the tuberculous was contemplated near the very district where I taught and boarded round, an inhabitant was surprised.

"Expect to cure consumption here!" he said. "Why, the people don't die of anything else!"

Nevertheless the Adirondack Cottage Sanatorium was built, under the control of Dr. Edward L. Trudeau, himself a consumptive; and thousands who would otherwise be under the sod are alive and well to-day. They recovered from their illness because they were under the direction of a wise healer and his co-workers, who taught them wholesome living and secured for them good substantial food and drink, in addition to fresh air and pure water.

The great pioneer of the modern treatment of tuberculosis, Dr. Brehmer, who was himself, like Dr. Trudeau, a consumptive, declared that tuberculosis in its early stages is always curable. What may we consider the first or the early, the incipient, stages of tuberculosis? These exist when one complains of the following symptoms:

1. A cough lasting more than a month—except whooping cough, which lasts six weeks, and oftentimes more. Such a cough may not, of course, mean tuberculosis, but it certainly calls for a thorough medical

this treatment comfort and relief from suffering can always be assured even the incurable.

First, there must be careful disposal of the sputum, which is practically the only means by which this disease is conveyed from the sick to the well. A handkerchief or cloth must always be held before the patient's face when he coughs or sneezes or spits, for thus is a droplet, or a spraying, or an atomizing infection avoided. The patient's handkerchiefs, towels, linen, and the like must be boiled by themselves be-

taken care of get well more surely in the winter than in the summer.

Sleep is an important part of the rest. Nowhere else should "nature's soft nurse" be so sedulously wooed. Insomnia is most exhausting in such a disease as this, when it is so necessary to build up the strength. Nor has any restorative, any tonic, ever been invented that will compare with sleep. Insomnia, with fatigue and overexertion, has brought on tuberculosis in many a case. We try to induce sleep without pills and powders if possible. It may be induced by drinking hot milk after the patient has been tucked in—with hot water bottles at his feet—for the night.

The patient should breathe fresh air, and be in the blessed sunshine so long as there is a ray of it. At night, no matter how cold, the windows must be open. The colder the air the surer the cure. Adirondack patients have done well at a temperature of forty below zero. Drafts are to be avoided by means of a screen or a blanket-draped clothes horse, appropriately placed. Only twice, from day to day, should the patient's windows be closed. A member of the family shuts the window half an hour before dressing time, and opens it again when the dressing is completed. And at bedtime the same thing is done.

Tuberculosis calls for plenty of nutritious food and good digestion, so that all the fuel taken into the body can be converted into healthy, germ-resisting tissue. The doctor must decide upon details for individual cases. But, in general, we try for the most nourishment with the least labor for the digestion. The patient should eat roasted or broiled meat (beef, mutton, or lamb), fowl, fresh vegetables and fruits, cereals with cream, plenty of sugar, good butter, table salt, and at or between meals six eggs and a quart of milk a day. Sweets, pastries, and dainties must be avoided. Between meals plenty of water should be drunk.

Use no medicines without the doctor's prescription. Cut out the patent medicines.

No one must imagine that the cure is easy. All the principles above mentioned must be rigorously followed. Above all, the patient must be obedient to his physician; must be persistent in every detail of the treatment enjoined upon him. The patient will generally be confident of his recovery; that is a state of mind happily common among such sufferers. Yet this must not make the patient careless: he must ever realize that his improvement and ultimate recovery depend largely upon his own determination to get well. He must not converse with any one except his physician or his nurse about his disease, nor adopt the suggestions, however well meant, of his friends.

The Right Kind of Shoes to Wear

By H. R. Snyder

MILLIONS of Americans have found real comfort in the perfect-fitting army shoe. They might help our farming feet too. The army shoe is built on a last that was designed along lines suggested by Major Salquin of the Swiss army. It is wide enough across the instep to allow each toe to take its share of the lifting and forward stress of walking. The shoe is so shaped that the metatarsal bones of the toes may extend radially outward along a straight line extending through a point in the center of the heel. It is long enough to allow a free forward sliding movement of the toes at each step. The heel is about an inch high. The sole is sufficiently heavy to assist the arch support as the body is thrown forward.

A change of shoes has been found beneficial, and our troops were provided with two pairs to each man. Although soldiers wear out shoe leather faster than men of any other occupation, it is money well spent; for it has been found that developing and strengthening the feet is as important as developing any other parts of the body.

He Got Down to His Last Nickel

By Helen Armstrong

AFEW years ago my uncle, John Merrian of Chicago, took Horace Greeley's advice—and the doctor's—and went West to grow up with the country.

Uncle John was seeking health, and he spent most of his money in rent for a farm in Colorado, so that he could live in the open.

Like many a "ten-foot" he thought he could carry Illinois climate and Illinois methods of farming with him to his new home. So he planted corn. Now, corn will grow almost anywhere when by natural selection types are bred for different climates, but Uncle John's corn was a failure. It was all husk and very little grain.

Many a poor man would be glad to lay his weary body on a bed of husks, and we all know the story of the prodigal son, who "would fain have filled his belly with husks that the swine did eat." But not so



Read the story and see why John, Jr., is a husk-y boy

with Uncle John. He saw neither rest nor food in the husks his field contained, so he pulled up stakes, boarded up the windows of his shack, and went to Denver to seek a job.

He looked in vain until his money gave out. He spent his last nickel for a hot tamale, and wondered where his next meal was coming from. That hot tamale was wrapped in corn husk. Uncle John hated corn husks, but this one gave him an idea. Why not sell his field of corn husks to the tamale makers? And straightway he followed up that idea,

and closed a contract, selling his corn husks as tamale wrappers.

It was the turning-point in his life. He now makes the raising of corn husks a business, and supplies the tamale makers of several cities. Uncle John is married now, and there is a John, Jr., who just loves to play with corn husks.

examination. No household remedies, no kindly suggestions of one's neighbors, will do in such a case. 2. Hoarseness that has lasted several weeks. 3. Poor appetite, especially in the morning; indigestion—with the "stomach cough," though I know of no stomach ailment that has a cough for a symptom—loss of weight and strength, paleness and generally run-down condition, which is so often spoken of as "that tired feeling." 4. Hawking and spitting, especially with a cough in the morning. 5. Night sweats. 6. A streak of blood in the sputum. This sign should not frighten one unduly, for such bleeding may come from many other things than consumption, and yet such a sign calls for careful investigation by a reliable doctor. 7. Afternoon fever, showing by the flushed face, alternating with chilly sensations. The spittle has to be examined for the tuberculosis germ, which is the essential cause of consumption. But it must not be concluded that there is no tuberculosis if this germ is not present, even after several examinations. The test is absolute if it is "positive," not so if it is "negative." When the doctor, after a thorough examination, remains in doubt, an X-ray of the chest should be taken; and this will surely reveal any latent tuberculous process in the lungs.

By the principles of the so-called modern treatment of tuberculosis most early cases are curable. Also many even advanced cases are arrested in their development, so that the sufferer may live as long as his neighbors if he will observe clean habits, be temperate, avoid stress and strain, and will remain free of the unhealthful conditions in which his disease began. And by

fore being added to the general wash. Whatever can be must be burned. The cuspidor must contain some fluid (water will suffice) so the sputum may not dry and become incorporated with the dust of the atmosphere. And the spittoon must be scalded to destroy all the tubercle bacilli. This is unpleasant but very necessary reading, and it applies equally to all infections from the upper air passages, such as pneumonia, whooping cough, grippe, and diphtheria.

Secondly, there must be rest. There is otherwise no hope for the sufferer's emaciated body, an organism on the verge of bankruptcy. It is a grave error for such a sufferer to go out into the fields and work, as would any farmhand. Rest there must be, especially when there is fever, and at least until the patient has recovered from the exhaustion which has all too often been the prime predisposition to the disease. For the consumption germ fattens on exhausted tissues.

In any family where there is a consumptive a clinical thermometer must be bought, and the use of it learned from the family doctor. The rest has got to be absolute if the bodily temperature reaches 100 degrees by the thermometer, and the patient must go to bed if the fever has gone beyond this.

The rest should if possible be outdoors—at least with open windows. And when the air is cold, warm headgear is to be worn, or the woolen helmet which comes down over the collar bone. The footwear must at least be warm and comfortable as the headgear. The body must always be warmly clothed, and then any amount of cold weather can be endured. Tuberculosis patients properly

How I Fell in Love With My Wife

By the Readers of
Farm and Fireside

Second Prize

WHEN I was fourteen years old I worked for a few months in a general store in a thriving New England town. I suppose that dozens of girls came into the store; but none of them disturbed my boyish mind until a certain farmer's daughter walked in one day and, without knowing it, settled her own future and mine then and there. Mere boy though I was, I had not seen this girl more than three or four times before I had made up my mind that I wanted her for a wife when the time came for marriage. I kept this decision strictly to myself for the time being, but it was there, and there to stay.

I worked in the store only a few months, then took Greeley's advice and went west. But for six years, while I was making my way in a new country, I never stopped thinking about the girl I had left behind me; and as the time came nearer when I realized that somebody else might carry off my prize I wrote to her.

Still I did not take her into my confidence in regard to my plans for her future. I wasn't old enough to marry, even if I could have supported a wife—which I couldn't do then. But I meant to have her. And, because of her, I came back east just to be near her.

I got a position in an Eastern city, but I went to see her occasionally, and after a year I proposed. I was very positively rejected, but that did not alter my determination. I kept up my occasional visits, and after another year I proposed a second time. Again I was rejected.

By this time I was in business and quite able to support a wife well. Perhaps I had learned enough from business to realize that it pays to make a proposition attractive. At any rate, for another year I carried on a regular campaign. I wrote her a letter every single day. I sent her books,

was not rejected. My future wife gave me her "yes," as a New Year's present, January 1, 1865. We were married that year. We have celebrated our golden wedding and are looking forward to our diamond jubilee. The girl who won the heart of the fourteen-year-old boy has held his love and respect for more than three score years. Perhaps I prized her the more because I had to win her. She was worth fighting for, and worth trying to keep after the first battle was won. Too many men think the winning is all there is to it; the keeping is perhaps even more important.

W. C. C.

Third Prize

TWELVE years ago I went to St. Louis to seek employment. I was twenty-four years old, country born and bred. My opportunities for an education had been very limited, and I had not attended school since I had completed the eighth grade. When I arrived in St. Louis I took the first job I found, that of janitor in a large printing establishment.

Resolved on getting a better education, I put in my spare moments during the day in study, and my evenings in attending night school. My work included the care of all the rooms in the building.

In the bindery-room there were half a score of young women employed. It was not long before I came to dread going through this room, as I had to do frequently, because I had a feeling that the girls were disposed to make fun of me. It is little wonder they did. I was awkward, overgrown, and bashful. My face was freckled. I had a shock of red hair that would not stay brushed, and I was always painfully aware that my clothes were shabby and my coat sleeves too short for my long arms.

From time to time I overheard scraps of conversation in the bindery-room that



—and naughty Central said, "Scat!"

girls make a slighting remark about me, followed by a chorus of laughter from the others. Suddenly Miss Wright, she with the gold-brown braid, sprang to her feet. Her face was flushed, her eyes blazing with indignation. "Girls," she exclaimed, "I won't stand this any longer! Shame on you for making fun of him when there's no reason for it! He's honest and upright and honorable, and, besides, he knows more than we do. He's forgotten more than we ever knew."

I heard. My heart began to leap and sing. What cared I now about the others! There was one who would be true. I, who had never before taken a passing interest in any woman, suddenly realized that I had met the one in all the world for me. She had been my champion when I was most unpopular. I would be her champion for life. I took her to church the next Sunday night, and the next, and the next, and inside of six months we were married. It was risky, for we were very poor, but so happy!

The years have passed and brought us prosperity, and there are a few "silver threads among the gold," but we were never so happy as now, and the dominating desire of my life has been so to live that I would not disappoint my "champion" when she said, her girlish voice quivering with indignation: "He's honest and upright and honorable."

A. H. R.

Through a Looking Glass

IT IS a great pleasure to me to tell how I fell in love with my wife. Well, it was not because she was beautiful, as you might suppose she is, because she is not. In my early days of courtship, when I began to be interested in married life, it was my luck to be always late with some beautiful girl whom I admired very much. It happened to me until the third time, and I began to wonder what was wrong with me. I thought that perhaps I was not dressing well enough, so I decided to dress better, and—I am telling the truth—had pretty good success until I began to talk on married life. So the cake would be all dough then. At last I met the one who must have been prepared for me from the foundation of the world, because I was about to give up all hopes.

I will never forget the day when we were sitting on a bridge when she produced a little mirror from her hand bag and began to look herself in the face. I knew she realized how far she was from being beautiful. Now, mind you, I did not think myself pretty, but I did think I was good-looking until she drew herself close to me and leaned her head against mine and said: "Don't you think we would make a good match?" I did not like that very well.

Then she says to me like this: "I have wondered why no one wanted me, and I just found out why." So I took the mirror and taking a good look at myself I paused a few moments and said: "I have found out why no one ever wanted me. Yes, we will make a good match." So I talked married life to her, and in exactly one week we were husband and wife. It is kind of funny to say I fell in love with my wife through a looking glass; but it sure is pure love, because I love her yet, and she loves me too.

L. C. [CONTINUED ON PAGE 20]



"Please talk pleasantly
to my kitty—"

The Prize Winner

I FELL in love with my wife before I ever saw her or knew what she looked like, and I didn't fall in love with her voice either. Years ago phones were a novelty, especially to those of the rural districts.

All the farmers in the neighborhood for miles around were put on one line, and anyone could take down the receiver and listen to his neighbor's conversation, and this so-called "piking" was freely done in those days. These lines were called "party lines," and rightly so, for they proved to be a source of perpetual entertainment.

That first winter I was recovering from an illness, and to while away the long tedious hours I also "piked." I didn't know one telephone operator's voice from another, but early in the game I discovered that one of them was distinctly different from the rest, by reason of her method of handling difficult or amusing situations.

I happened in on the line one day shortly before Christmas, when a little girl called Central and asked to talk to Santa Claus. Quick as a flash Central connected her with the grumpiest old bachelor in town—and the memory of that conversation convulses me with laughter even yet, for there were mutual surprises and consternation at both ends of the wire.

Another time one lady who evidently had never seen a telephone before rang Central and said: "What shall I do with the tube?"—meaning the receiver. Quite patiently over and over again the girl told her: "Put it to your ear." But she seemed not to have had it there. "Oh, eat it," cried Central—and just in time to catch that retort the lady had put it to her ear and Central "got hers," but she had killed the plug and heard it not.

One day the old maid on our line asked Central if she would please talk pleasantly to her cat while she held the receiver to the animal's ear. "She is such a bright creature, I want to see what she will do," said the cat lover. But Central yelled "Scat!" and the affrighted kitty flew back in her doting mistress's face, and the laugh was all mine, for I was piking. Ridiculous, pathetic, and ludicrous situations this girl met with ready tact and an failing sense of humor, and I wasn't long in deciding that she would prove a rare winner as a permanent fixture in a man's heart and home.

Ye forehanded ones who chose your mates for their good cooking, baking, or other housekeeping qualifications may scoff at my judgment, but all these other feely accomplishments may be later acquired, while a wife with a keen sense of humor possesses the priceless jewel—a gift the gods—and after fourteen years of married life I have never repented my choice. In the trials and tribulations that have come our way this charming personality of hers has saved many a near-serious situation, and helped to avoid countless family jars. But she doesn't know that piking I learned to love her, for she takes a piker and I'm not running any chance of losing her.

L. J. D.



She was boiling mad

magazines, all kinds of things to interest her. There were two post-offices at that time in the town where she lived, and a move was made to consolidate them. One of the arguments used was that this girl was the only person that received any mail at one post-office, and that, although she got "more than aplenty," she didn't need a whole post-office for it.

Well, the point I want to make is this: that if you want anything enough to put your whole heart and all your persistence and patience and determination into winning it, you can pretty safely count on success. For the next time I proposed I

made me feel sure they were ridiculing me. Naturally sensitive, I grew more awkward and self-conscious. There was, however, one young woman who took no part in their conversation, Miss Eva Wright, a slender, quiet girl, with brown eyes and a wealth of gold-brown hair, which she wore in a long braid, pinned around her head like a crown. She was not a girl who would have attracted much attention anywhere, but her hair and eyes would have redeemed any face from plainness.

One day I passed through the bindery, and as I paused for a moment in a little hallway adjoining I overheard one of the

Can the Farmer Afford to Speculate?

By James H. Collins

A FINANCIAL system that lands its originator in Millionaire's Row, New York, ought to have merits worth considering.

Such a system was devised, shortly after the Civil War, by a doctor who, on leaving the Confederate Army, went into the publishing business in St. Louis. As a publisher he was so successful that from time to time there was surplus money to invest. He made two rules:

First—Never speculate. Second—Buy nothing but St. Louis real estate.

Belief in his own community led him to choose local real estate as an investment; and he avoided speculation because he held that no man could understand more than one business. His business was publishing. It made money. He would not gamble in lines that he did not understand. Even if you made money by speculating in some other line, really you lost, he maintained, because attention was diverted from your own business.

One day a friend came to this publisher and offered him a share in a mine for \$10,000. The publisher had just sold a piece of real estate for that sum. His friend declared that the investment would pay 1,000 per cent in six months. The publisher believed his friend. He had the money lying at his bank. Actually, the mine paid far more within a year. Yet the publisher did not invest, and had no regrets.

"For if I'd put that money in a mine, and won such profits," he reasoned, "the experience would have spoiled me forever for

buying St. Louis real estate. I'd have taken my mind off the publishing business, and probably gone on to speculation and ruin."

The temptation to speculate is more general in business life than people realize. When "speculation" is mentioned we think of the Wall Street plunger and his operations on margin, perhaps with other people's money. But speculation is more widespread than that.

If we think of it as an evil it is usually in connection with loss—to most of us losing money is the greatest vice in speculation.

But a good stiff money loss the first time a person is tempted to take a "flyer" is often the finest profit that can be secured from speculation, and is money well gambled if it effects a lasting cure.

The real evil of speculation lies in the way it diverts attention from one's own work and business.

Some years ago three young fellows who had been with a large railway supply con-

cern got together capital of their own and went into business. Collectively, they understood every phase of their line—the financing, selling, and developing of good railway appliances. This knowledge, with character and singleness of purpose, soon built up a strong following. They were always on the job, won confidence, made friends.

Just at the point where their concern should have begun to grow automatically along broad lines, however, one of the partners put some spare money behind a stock-market tip. It was a straight tip, unfortunately, and he made a profit. That led him to follow up his success, and the other partners were drawn into another safe flyer.

Since that time there has never been a period when all the partners were safely out of the stock market. The habit of carrying a little side line has become chronic. As speculators they have been conservative and successful. Operations are carried on with money not needed in their busi-

ness—money they could afford to lose. They have had losses, to be sure, but they have been limited by setting bounds to the amount of money risked in a given operation.

In a larger sense, however, these supply men have experienced nothing but losses—because speculation has taken attention from their main business. They watch quotations morning, noon, and night. At luncheon it is usually the stock market that furnishes topics of discussion, not their own business. They started out for themselves, with a solid following of men who were growing with themselves. One after another these customers have dropped away to go elsewhere, and have been replaced by others who, like the partner, have one eye on their own affairs and the other on the ticker.

Farmers are sometimes tempted to speculate, to buy stocks or bonds as an investment. They have this temptation to resist just as city business men have, and it hurts their efficiency as farmers if they do it, too. They lose sight of the main issues in business, such as growing and distributing crops, and go wandering off through by-paths, chasing will-o'-the-wisps, and lose even when it appears that they have won.

To decide whether you can afford to take a flyer in your particular line is easy enough. Measure the chances, not in the amount of money risked or the loss if the speculation turns against you, but size up the deal from the standpoint of the attention it will divert from your real business. If you can afford it on that basis, you are an exception.



She Stayed at Home and Became Famous

By N. W. Walburn

HER own home town didn't bore Jane Todd, even if it was small and uninteresting and quiet. She liked it. And she stayed in it. Even when her girl and boy friends went to the city, leaving the little New England village of Calais, Maine, to its fate, Jane stayed to suffer with it.

The only part of her that ever went to the city was her reputation, and the candy that made it. Those go to the city in carloads. And people from Maine to California, and people in Canada, and people in other countries, glory in Jane's candies and talk about her reputation.

She started "Jane Todd's Home-Made Sweets" in her own kitchen, with one pot on the back of the stove. She made fudge, kisses, and bonbons, and sold them herself from a tin tray on a camouflaged dry-goods box in a Main Street store.

Everybody bought, and it wasn't long until Jane had annexed about half the store space, married the proprietor, hired another building for a factory, and buckled down to the business of seeing that the candy shipments were promptly made up and got out. Those big New York, Chicago, San Francisco, and Montreal dealers are very exacting about shipments, you know.

In the first place, Miss Todd didn't want to leave home. Now she's so everlastingly busy being prosperous that she can't leave it. She still sees to it that her candy is all home-made, under her rigid personal supervision. Besides that, she has to manage her husband, and the big farm from which she gets her cream, butter, and eggs, and the store and the factory and a lot of things.

Before you start off to seek your fortune

in the big city, it might not be a bad idea to look about you at home. Perhaps there is a better chance right there to become rich and famous.

It really doesn't make so much difference where you are. It's what you are doing and how you are doing it that counts.

How I Cured Myself of the Worry Habit

By J. C. Kilmere

SPEAKING of how he broke off smoking, a friend said to me: "I made up my mind not to be mastered by anything that couldn't talk." Later, when I was wrestling with the worry habit, I remembered that.

I had worried until I was under the doctor's care. Then, one day, my husband and I were riding on a street car that was blocked in front of a store with large windows. Glancing toward the windows I saw the reflection of a woman's face with the most distressed expression imaginable. I had looked for some time before I realized that the face belonged to my husband's wife. There was not a thing to hurry for, and there I sat fuming and fretting. I laughed—and was more surprised at the difference the laugh made in my appearance.

Then and there I resolved to be master of the thing that couldn't talk.

First I joined a gymnasium, and it did

wonders for me. I became happy and enthusiastic about it. And whenever I found myself worrying or thinking unhappy thoughts, I sat down and read an interesting article or an entertaining story, or just a funny paragraph. If after this my mind switched back to gloom, I tried memorizing a short poem.

The plan worked. It has given me so many pleasant things to think about that only rarely now do I have to hunt up something new.

Then I established in my home a "refuge spot," which still is and always will be a fixture there. It contains books—cheerful and happy ones. And when task follows task until it seems there will not be hours enough in the day for their accomplishment, when I find myself becoming nervous and hurrying from one thing to another, when a fit of the blues seems imminent—I simply drop everything and flee to my refuge to read myself calm.

He's Washington's Nearest Living Relative

By Verne Dyson

HAD George Washington permitted himself to be crowned king of the United States, as was suggested by some of the generals who followed him through victory in the Revolutionary War, the present ruler of the country probably would be Colonel John C. Lewis of Louisville, Kentucky, who is the nearest living male relative to Washington. If the Kentucky colonel were on the throne, he probably would be known as King John.

Washington died childless. Colonel Lewis is a direct descendant of Betty Washington, the President's sister. The genealogy of the Lewis family shows that Colonel Fielding Lewis married Betty Washington. They had a son Fielding, and he had a son Charles. A son of the latter was George Washington Lewis, who was the father of Colonel John C. Lewis. The colonel is the great-great-grand-nephew of George Washington.

In appearance Colonel Lewis is said to resemble his noted ancestor, and the parallel extends to other qualities. Colonel Lewis is a successful business man and a patriot. He was born in Lebanon, Tennes-



see, August 30, 1843. Immediately after the Civil War he went to Louisville, where he prospered as a merchant.

Colonel Lewis has made an interesting collection of books on George Washington and his times. The Kentuckian is a specialist on the biography of our first President.

"I have studied the character of George Washington from all angles," said Colonel Lewis, "and, strange as it may seem, it is his interest in agriculture that charmed me most. There was something noble and inspiring in his love of the soil, and this is an attractive side of his character that is often overlooked. Even when he was in the White House he was in daily communication with the overseer of his immense plantation. Washington's letters to his foreman constitute an interesting part of his correspondence."

It is a fact, though not very generally known, that George Washington was one of the finest farmers of his day. He knew more about crop rotation, and kept more accurate cost accounts of the products of his acres, than many a man who is counted a first-class farmer to-day.

The Goose King Tells His Story

He saw his opportunity, grasped it, and in eight years took his place
as the nation's leader in that field

By William H. Firkie

BEFORE the war I wouldn't have written this article under any consideration. I've had to work pretty hard for my knowledge of the ways of the world, both farm business, and success hasn't come easy. I never does. Make no mistake about it. And I wouldn't have had any desire to tell the hard-earned secrets of my goose business.

Now, however, I feel that there is room enough for everyone in every kind of business. The war has broadened me, as it everyone else, and although I still look on my method of feeding geese as an inventor looks upon a successful model for a certain kind of machine, I am glad to have an opportunity to

other farmers. I got into this work, and how it is carried on.

Every pound of corn we produce nowadays is a shot against the war against world famine, and this story inspires production of more things to eat. I will have been worth while.

Thanks to the service flag, donated to the family by the second eldest son, who is in the army, we have had to work a little harder these last couple of years, as

was my first lieutenant in the goose business. He took care of the order-geese buying and marketing of the finished product. But last year

was a record year despite his absence, because we wanted to feel sure at home that we were doing everything we could to supply plenty for the men of the army to eat.

It has always been a principle of mine to keep an eye out for opportunity, and when one shows up and proves to be a real one, to push it for all it is worth. I don't mean to jump into a thing along just because it looks good, but to develop just as far as possible in a big way that which proves itself out in a small way and takes kindly to growing up into something bigger. This development process has to be planned carefully so you

don't get tangled financially and ruin your business by distancing your capital, or your production cost eating your profits. But these things will come along all right if you go at them systematically and carefully.

About the best adviser a business man, particularly a small business man, can have is a reliable banker. Our success means success, and he will help in many ways

on the rough spots in the road, and these don't always get paved effectively with gold, either. As an example of what I am talking about, take my goose business.

I began feeding geese eight years ago. I was purely by accident I got into the business. A friend of mine, knowing I was willing to invest in anything that was promising, came to me and outlined the

proposition, of which I had never heard before.

"Bill," he said, "I've just returned from the East. They make pretty good money down there feeding geese. It costs like the dickens, because they don't raise all their feed; and they come into the Central States for some of the feeder geese. Suppose you and I go into this business. I know a little about it, and we can form a partnership. We can get plenty of feed here, much cheaper than they can buy it down East."

His argument sounded good, so we went into business. Being new at the goose game, I was cautious; so we started with only a few hundred birds. We made money on them, and kept increasing the number every year.

A few years ago I launched into business for myself, on a large scale. Last year I fed 55,000 geese, on which I made a profit of about 35 cents each, despite the fact that 5,000 geese died. The risk in the business is, perhaps, one of the things which keep many out of it. However, no farmer need to fear this if he goes at things in a businesslike way.

The business has many pleasant sidelights. One of these is that no alarm clock is needed to wake everyone up in the morning—the geese do that in fine shape. Another thing is that the place never gets lonesome, for some days, especially Sunday, I have plenty of visitors. On Sunday as high as 2,000 people visit the farm. The record, I believe, is 8,000 people in one day. It was a Sunday, of course.

It is a curiosity to see all of the geese; and one hears many funny remarks from the visitors. Everyone is welcome to the place, however. You might think that the visitors were a bother; but, on the contrary, I look upon them as an asset. They see how the geese are fed, and how nice they look; and I believe that it creates an appetite for them. They can't help but admire

my good. My farm is right on the edge of town, and there is no trouble in reaching it.

The secret in profitable goose production is economical feeding. Corn is the best food for a goose; but that does not mean that I feed them nothing but grain. Indeed, roughness plays a big part in keeping down the cost of production. Moreover, I let the geese harvest their own grain—that is, I generally run them into a field of corn, just as you would hogs; but I cut the corn with a binder, without the twine, and let the corn lie where it falls.

The birds will do the rest. Like cattle or hogs, they eat everything but the stalk itself. Leaves, husks, and grain are devoured with avidity. In addition to this, I have shelled corn before them at all times; but they show a preference for the cut corn. Indeed, when I drive into the field with a load of shock corn, harvested from another piece of ground, the geese follow the wagon around like young pigs do the man with a bucket of skimmed milk.

They wait until the first bundle is thrown from the wagon, and all of them fairly pounce upon it. It surely is a great sight, and often reminds me of how our boys pounced on the Huns.

You would be surprised to see how geese will clean up a field of corn. There is nothing left but the bare stalks when they are finished. Plenty of green-cut corn, you see, means they eat a lot of leaves and husks, thus conserving the grain itself. This is what I mean by economical production.

Water is very essential—in fact, as necessary as feed—and it plays just as big a part in putting on flesh. I have figured out that a goose will drink a half-gallon of water to a pint of corn. In order to have plenty of clean running water before them at all times, I built a tank from which water is piped to all of the fields where there are geese. The tanks are kept filled all the time; and in the large fields I have hog waterers in out-of-the-way corners, so that when they eat they can drink and rest.

Often the goose will not walk 300 to 400 yards for a drink after eating, whereas, if it is near-by, that will be the first thing it goes for. Then the bird rests—all of the time—and when it rests it is laying on fat.

To hand-feed 55,000 geese would be some job. By studying the habits of the

used for caskets. There are no bottoms or tops to them. When I put them out I lay several boards together to make a floor. These stick out a bit on one side. I prop up the box on the side where the boards stick out, so that the corn will flow all the time. I then nail a piece of wood along the end of the bottom, or improvised floor, thus making a trough.

The geese come to this and eat whenever they like.

Like hogs, they know when they have enough, so there is no possibility of them becoming foundered and causing trouble. This feature enables me to save a whole lot of labor; moreover, I am always sure that the geese are getting enough, and I don't need so much feeding space. If I threw the corn on the ground it probably would mean some waste.

No business is without its risks; neither is feeding geese. As I said before, I lost 5,000 last year. This is unavoidable, and is due to my method of handling and feeding the birds. I have tried various methods of operation, but have been unsuccessful in reducing the death loss.

I feed the geese about forty days. I figure from experience that it requires this length of time to get the geese in market condition. In buying the geese as feeders I cannot tell how much weight each bird carries. Quite naturally, some will be fatter than others, and before the feeding period is finished they get too fat, and die.

There is no way of avoiding this. On a smaller place, perhaps; but not on mine. We go into certain districts of Illinois, Tennessee, Kentucky, Missouri, and Arkansas and buy young geese from farmers and dealers. We ship the stuff home, and I unload them.

We pay from 15 to 20 cents a pound for the geese, and get 35 cents on the market. Most of the geese, in feeder condition, are bought from dealers, who must have a profit, in addition to the profit made by the producer. For that reason I say that it is easy for the average farmer to make money. In the first place, he can raise his own geese, thus avoiding the paying of two profits. He has his own feed at market price, and can easily find a market for the finished product.

Moreover, the risk is not as great—that is, the money involved is not as large; and when a bird dies he is not out so much when he does his own producing.

Another thing in favor of the individual farmer entering the business is that hardly any equipment is needed. Outside of feeders and water tanks I have but a few yards of fence. The geese are fed from October to January, and require no shelter except for feeding in cold weather.

As a matter of cost of feeding, it costs but 66 cents to feed a pint of \$1 corn per day for forty days.

I ship my geese to New York, where a commission man sells them for me. If the farmer had less than a carload he could easily sell them on his nearest market at good prices.

Any cattle feeder can feed geese. It is a profitable business, and can be started with a very small outlay of cash, if one breeds his own geese.



William H. Firkie



Most Men Are a Little Blind—at Times

NOBODY has any use for a coward. Nor much for a desperado. But when you get a man who is blessed with a well-regulated mixture of caution and daring he is bound to succeed. He has sense enough to approach a proposition carefully, and sportsmanship enough to take a reasonable chance on it once he is satisfied that its foundation is sound.

It has never been our pleasure to publish the story of a successful man who combined these two things any better than William H. Firkie. He started in a small way, and he took a chance on the goose business, though he knew nothing about the details of it. That was only eight years ago. To-day he is known as the Goose King.

Last year he raised so many birds that, although 5,000 of them died, he scarcely noticed the loss. He still had 50,000 for the market, which he sold at an average profit of 35 cents apiece. But that is not the amazing thing. What surprises us is that more men don't see and grasp the chances for success right around them, like Firkie did.

Firkie took the time from his business out near Mansfield, Illinois, to give us this story, and if you read it for what it is—the true story of how a daring, cautious man goes at a business proposition—we believe it will start mighty valuable thinking in a lot of human heads. It certainly did in ours, and it seems, from all we've ever been able to find out, that you're just about the same kind of folks we are. THE EDITOR.

the goose as a dish after seeing them eat plenty of fine yellow corn, and live in the open, with good clean water, always running.

Moreover, all of these people mean that the town does a good business, especially the restaurants and ice-cream stores. I own a bank in town, so it means bigger deposits. You see, it all works back for

geese I have been able to cut labor to the bone. I have several self-feeders, holding 100 bushels of corn, that I keep filled. I have to buy a lot of corn, and instead of dumping it into a bin I have the man who hauls it fill up the feeders. This saves more labor for me.

These feeders are simple in construction. I have boxes something similar to those

I ship my geese to New York, where a commission man sells them for me. If the farmer had less than a carload he could easily sell them on his nearest market at good prices.

Any cattle feeder can feed geese. It is a profitable business, and can be started with a very small outlay of cash, if one breeds his own geese.

The Mystery at Glen Cove

Though never a prize fighter, Jimmy seems capable of holding his own when he can take his opponent by surprise

By Howard Vincent O'Brien

AS STEALTHILY as my bulk and the thickness of the shrubbery would permit, I followed her. Twice she stopped, and once she turned and retraced her steps. She came within a few feet of where I stood. A moonbeam, filtering through the branches, revealed her features, which showed signs of a wavering resolution. It was not hard to imagine that this mysterious woman was debating a return to the lonely man she had left in the glen by the seaside.

A weary sigh escaped her. She stood for a moment, motionless. Then something hard and cold settled over her face like a mask. With a quick movement of her hand she brushed away the tears which glittered at her eyes, and a moment later I could hear the faint swish of the leaves marking her progress in the direction she had first taken.

I had taken only a few steps in pursuit when I stopped, my heart leaping violently. I heard the voices of a man and a woman raised in altercation. I caught an oath, growled in a deep masculine voice, then a phrase in a foreign language. The woman's voice was raised in what I gathered to be expostulation or reproach. I pressed forward silently.

Beside Mrs. Brandt, or rather in front of her, unmistakably barring her path, was a man. I caught only an occasional glimpse of his face, but I was sure that I had never seen him before.

I could have sworn that the voices I had heard, particularly the man's, were heated and angry. But the first sight which met my eyes as I reached my observation point was the man putting his arms around the lady. That was astonishing enough in itself, but I could scarcely resist a shudder of disgust at her reception of these advances. My opinion of Mrs. Brandt, as I have intimated, was not high, but it was difficult to believe that a woman of such inherent refinement could go deliberately from the embraces of one man—and such a man!—to those of another.

As I watched the little drama in the moonlit glade, however, I became aware that possibly I was doing the woman an injustice. For, if she was not resisting the importunities of the man, she was certainly not yielding to them. In fact, it gradually dawned upon me that she was as passive as a stone image.

The same consciousness seemed to come to her companion, for with a savage oath he thrust her suddenly from him. She reeled against a tree, holding her throat. My blood boiled. I had no regard for the woman, but I quickly conceived a very violent dislike for her ungallant admirer.

Suddenly there was a change in his manner. He walked over to the woman and began what was evidently a plea of some sort. His voice rose and fell with impassioned earnestness. He was urging her to something, it was easy to see; and, what was equally clear, he was not having much success at it.

Occasionally she replied in a low tone, but for the most part she listened silently. Her face was unbelievably changed. The fleeting gentleness which had characterized it during Steele's avowal of love had given place to something bitter and cruel and mercilessly determined.

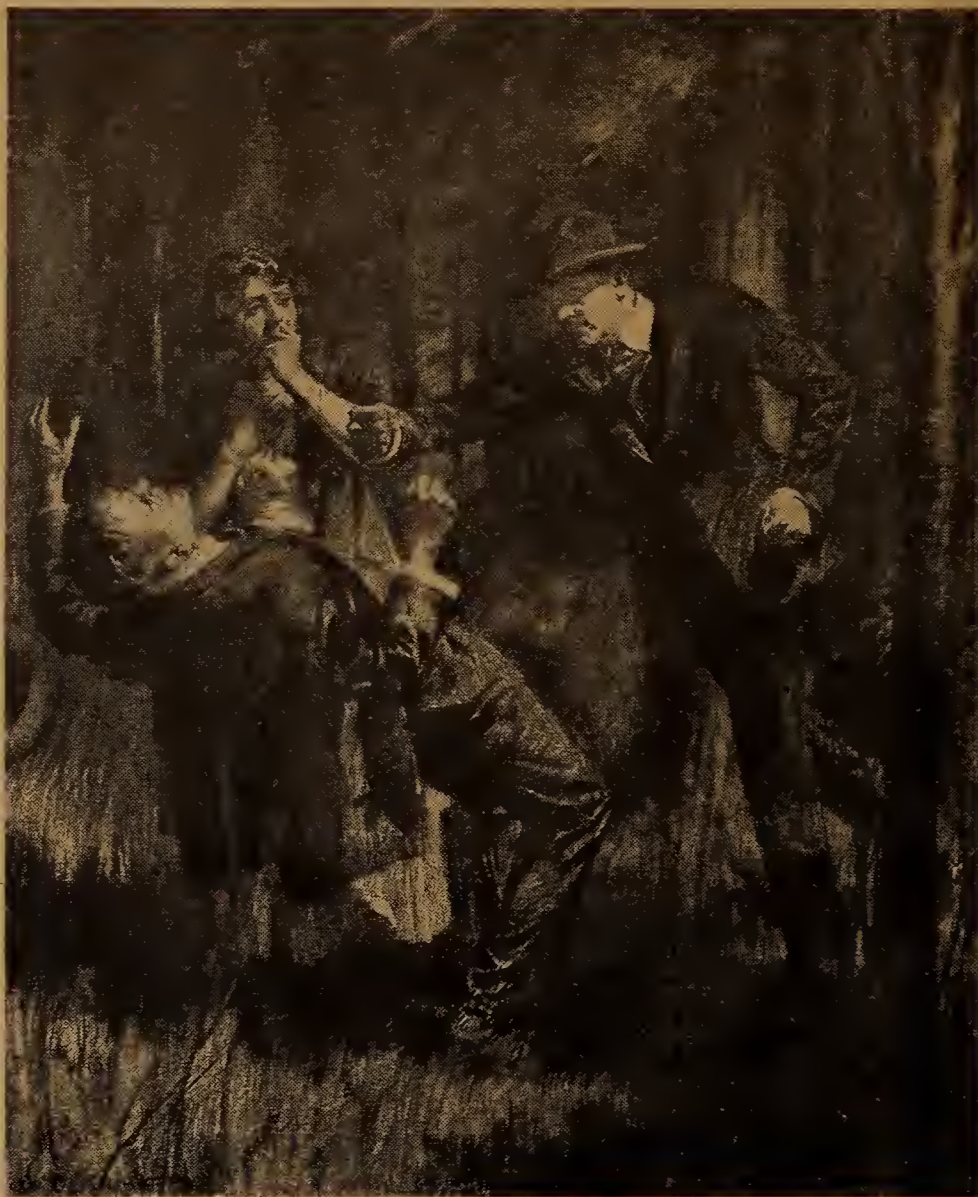
The argument, so one-sided, went on interminably. It began to look as if there would be no end. I was a little chilled and stiff with standing rigid, and I yearned for something to happen. I was learning nothing as it was. Then I caught the word "Steele," and pricked up my ears.

The word seemed to affect the woman also. She straightened and her eyes flashed in the moonlight.

"I want you to understand, Paul," I could hear her say in her low, vibrant voice, "that Mr. Steele has no part whatever in this business. What I have done I have done alone. What I shall do I shall do alone."

The man gave vent to an evil chuckle. "You protest too much, Chiquita," he rasped unpleasantly. "If this man Steele had nothing to do with it, what sent him down to New York?"

"That concerns him, I suppose," she answered coldly.



He went down like a log before my fist

"It's clear enough," he growled. "He went into it because he wanted you out of it. Well, so far I'm with him."

"Have you anything more to say?" she inquired icily.

"Wait." He laid a detaining hand on her wrist. I could see her shudder as she shook it off. "Wait a moment. I want to ask you something. Do you think that fellow wants to marry you?"

"And if he does?"

"Well—if he does? There's a bridge to cross first, isn't there? Come; I'm not priggish. Suppose we strike a bargain. You come through like a good girl and I'll guarantee to keep my mouth shut. You can make any sort of a monkey out of this fellow Steele you have a mind to. What do you say?"

"What is your guaranty worth?"

"I swear it, Marie."

She laughed quite mirthlessly.

"Is your estimation of my intelligence then so low that you can believe for an instant that I would trust you—in anything?" The question was like the lash of a whip. I fancied that the man winced, but he countered with a sneer.

"It isn't a case of your trusting me, you know. I hold all the cards—"

"All? I think not. There's one that I hold, remember. And it's trumps."

He seemed to ignore her interruption.

"I put it up to you straight. If you want

to play your game with Steele, you've got to play mine with me. Either you come through, and I give you the chance, or I'll slip the truth to him—and then you're done."

"Is that all?"

"No," he growled in a sudden paroxysm of rage, "it isn't all. You keep on playing with me and, by God, if you ever see your meddling friend again you'll see him with lilies around him!"

"Is that a threat?"

"You're right, it's a threat. He's played his amateur game so far without getting hurt because I've been too busy to attend to him. Besides, I never take risks unless I have a reason. But it's reason enough if it'll make you sweat blood, you—"

"Will you let me go now?" she inquired quietly.

"For the last time, Marie!" He seemed to be trembling with suppressed anger.

"No," she said firmly, her head held high. Somehow, there was something magnificent about her as she faced the angry man beside her.

"I swear before God we won't hurt the boy—not a scratch!"

"No."

"And you'll never see me again."

"No."

"Then, by heaven, I'll screw it out of you!" With a snarl like a mad animal his hands shot out, talon-like, and seized her throat. Before I quite realized the sudden turn of events he was shaking her violently,

ferociously, in an ecstasy of rage. Then the numbness which had held my brain snapped, and with a Berserker oath of my own I proceeded to take a hand in the affair.

He went down like a log before my fist. I turned to Mrs. Brandt, but I caught only a fleeting glimpse of a terrified and yet oddly composed face before she disappeared in the darkness. Then I had to return my attention to my far from disabled antagonist.

With a snarl he sprang at me, and I caught the glint of steel in his hand. The years of grace are far behind me, but that brief metallic flash had potent effect. I dodged like a young boxer. And I was just in time. The wicked knife grazed my arm, slitting the sleeve, and penetrating deep enough to draw blood.

With one eye I looked for a stick or something with which to defend myself. With the other I watched for a repetition of the assault. But my assailant had apparently changed his sanguinary heart. Only the rapidly diminishing sound of crackling branches indicated the direction of his retreat.

Still too excited to be cautious, or even sensible, I scrambled hastily in pursuit. A fallen tree appeared in my path, and with a sudden crash I went down, my head striking a stone.

When I awoke to daylight and the twittering of birds it was necessary for me to concentrate on my surroundings to believe that the events of the night had been other than a peculiarly vivid nightmare. But the dull ache in my head and the smooth round stone were not imaginary. And Mrs. Brandt's handkerchief, caught on a branch, was quite conclusive.

Rather unsteadily I dragged myself to my feet. I went to the Yacht Club, telephoned my man, and arranged for fresh linen and a change of clothing to be forwarded to me there. So I was able to make myself presentable, and go down to breakfast quite as if the night had been uneventful.

In my box I found a brief note from Steele, saying that he was at the Debetts', and asking me to join him there as soon as convenient. I went up immediately.

It took but an instant to realize that some great change had come over Steele. He looked haggard, as if he had not slept, and there was a kind of dull pain in his eyes.

He began by asking my plans. Having none, it was easy to answer him. My reply seemed partly to relieve, partly to disturb him.

"What are you going to do?" I asked bluntly.

"I—I don't know," he confessed with a hesitancy quite foreign to him.

"Let's review the whole business," I said presently, not knowing how else to ease the peculiar situation.

"Well?"

"To begin with, it was not suicide. Nor was it murder, because he didn't die. Secondly, the live corpse was removed with Agatha Burchard's assistance or, at least, connivance. During his brief convalescence she secreted him, unbeknown to her own family."

"Yes. Go on."

"We leave the *corpus delicti* boarding a warship in the dead of night. Whither bound? We don't know. Now, then, let's go back to the beginning."

"Yes."

"Almost with the sound of the shot which was meant to kill Carter, Marie Brandt vanished—and the lights went out," I added narrowly.

Steele seemed to rouse himself from his strange lethargy at the imputation.

"She couldn't have turned out the lights. The fuse box is in the pantry."

"All right," I agreed, "that signifies that there was more than one party to the crime. Now, who was in the pantry?"

Steele did not reply, but from the expression on his face I could see that the same thought had come to him.

We smoked silently for a time, each busy with his own thoughts. Then an idea occurred to me.

"How long was (CONTINUED ON PAGE 39)

What Has Gone Before

THE whole thing started at a dinner party at the home of Admiral Debbett. A stranger called Carter was there; Agatha Burchard, a young debutante, brought him. During the evening he was called to the telephone by the Japanese butler, Toguchi. A moment later all of the lights went out. Just as they flashed on again a gasping sound was heard in the telephone booth. When the guests rushed in they found Carter unconscious. He had been shot. During the excitement, Marie Brandt, an attractive young widow, disappeared. This whirl of events led Leslie Steele, a bachelor, young and in love with Mrs. Brandt, and his friend Jimmy to take a hand. They pursued fleeing automobiles; were themselves pursued; found Marie Brandt, only to lose her again; were held by the United States Secret Service; escaped; found Carter, to have him disappear on a torpedo destroyer, and discovered Marie Brandt once more. When we left them, Steele had just told her of his love, and she had asked him to cease trying to solve the mystery of her disappearance. At this point Jimmy decided to have a word with her himself.



l'Arc de Triomphe, Paris

ANNOUNCEMENT

WE are resuming quantity production on Goodyear Passenger Car Tires for private use.

The shortage of these tires that existed during the period of war was inevitable.

Promptly upon America's entry into the war, Goodyear devoted great effort to the production of gas masks, airplane, automobile and truck tires, balloons and dirigibles,

urgently needed by our army and navy.

This, of course, necessitated a cut in our passenger car tire output, for general distribution.

Later, there came the Government order limiting all tire makers to 50 per cent of their normal output.

This restriction has since been lifted.

So, as normal conditions are being restored, we are increasing our production steadily in an effort to meet the greatly increased demand for Goodyear Tires.

However, to insure prompt delivery, we suggest that you estimate your near-future requirements, placing your order now with your Goodyear Service Station Dealer.

THE GOODYEAR TIRE & RUBBER COMPANY, AKRON, OHIO

GOODYEAR
AKRON

It's the Eggs You Get That Count

There never was a time when the poor hen had less license to live, nor when a good hen paid a greater profit to her owner, than right now

By Harry R. Lewis

NO ONE thing has created greater interest and been responsible for more progress in poultry husbandry in the last six years than the development of egg-laying contests. They have shown the importance of individuality in hens, emphasized the fact that some hens lay a large number of eggs and are profitable, while other hens of the same breed and variety produce but few eggs and are unprofitable. These contests show us how to cull birds on a basis of their performance, by external characteristics.

Until 1916, contest hens had been given only one year's laying test, but the Vineland (New Jersey) contest considers not only the pullet year production, but the second year as well. The pullet progeny of these yearling hens are now taking part in the third-year contest. Thus this contest becomes a breeding problem which measures the efficiency of hens and male birds with which they are mated to produce daughters capable of great and sustained production.

Every practical poultryman and thoughtful breeder of all kinds of live stock will agree that the summary of results which follows is rather startling:

Our contest is composed of 100 pens of 10 birds each. The varieties tested represent the four standard breeds: Plymouth Rocks, Wyandottes, Rhode Island Reds, and Leghorns. Every variety represented has at least three competing pens. The birds are cared for with the greatest possible detail to insure a maximum production.

The 1,000 birds at the contest weigh 2.06 tons, and produced 10 tons of eggs during their pullet year and 8 tons of eggs during their second year. The average weight of each bird was 4.12 pounds. These hens produced in eggs during their pullet year approximately five times their own body weight, and four times their own body weight during the second year. The hen is one of the most efficient converters of raw material into a finished product, outside of her body, to be found on the farm. Dr. Pearl, chief statistician for the Food Administration, in a recent statement regarding this point said:

"I have been gratified because my work in the Food Administration has put me in a position to realize how acute the food problem may become under certain circumstances. The studies we have conducted here have made it increasingly clear that the day of the large unit, such as the beef animal, in the production of necessary foods of animal origin is rapidly passing. The steer is too uneconomic a transformer of energy to last long as a chief source of animal foods for mankind. The war has very much accentuated this development, and has turned our attention to the relatively greater economy in production of smaller units, such as poultry."

Now to analyze the performance of these 1,000 birds at Vineland during their first and second laying season: Beginning with their pullet production from November 1, 1916, to November 1, 1917, the 1,000 birds succeeded in laying 129,499 eggs, or an average of 129.5 per hen, which is an average production per bird for the pullet year of 44.4 per cent, and 35.4 per cent for the second year. Considered in the interest of practical poultry production this means that pullets succeeded in laying approximately 30 more eggs each during their first year than their second year. At present prices of eggs this may mean a decided advantage in favor of the pullet production, but in normal seasons, when eggs are worth from three to four cents apiece, it shows an advantage in keeping over a large number of selected pullets to produce eggs during their second year. The yearlings start their second year's production with no charge for rearing, as in the case of the pullets, and if a rigid selection is practiced to eliminate the inferior birds at the conclusion of their first year's lay, the remaining yearlings will be immensely profitable as producers of eggs.

The winning pen at the contest (White Leghorn) during the first year made an

average lay of 211 eggs per bird. During the second year, however, this pen only averaged 147 eggs, making a total of 368 eggs per bird for the two years. This pen of ten pullets, in order to produce this amount of eggs during the pullet year, consumed 82 pounds of feed per bird, costing \$2.35, and produced eggs valued at \$85, which left a net return above feed of over \$6 per bird. While this is phenomenal, it is interesting to compare it with the average of the laying contest, which was \$3.80 net above feed cost. The winning pen for the two years were also White Leghorns. These laid an average of 217 eggs for the first year and 169 eggs the second, making a total of 386 eggs.

Among individual hens one extremely remarkable record was secured during the pullet year: A White Plymouth Rock, owned and bred by Helliston Hill Poultry Farm, laid 301 eggs in 365 consecutive days. This did not apparently impair her vitality, for during her second year she laid 177 eggs, making a total of 478 eggs for the two-year period. The highest individual performance for the two-year period, however, was that made by a Barred Plymouth Rock hen owned and bred by Harry H. Ober. This hen laid 268 eggs during her pullet year and 233 eggs during her yearling year, making a total of 501 eggs for the two-year period. Such records as these are phenomenal, but show what good birds, well bred and properly cared for, may accomplish. A careful analysis of both individual and pen records for all breeds at the contest show that high fecundity is not so much a matter of intelligent breeding or variety as of intelligent breeding within a certain family. The problem of securing a profitable egg production depends on the ability of the poultryman to select and breed his birds carefully and consistently, with egg production as the primary consideration.

Much of the excellent production at the Vineland contest was due to the rations used and methods of feeding. The following rations were employed throughout the contest:

100 pounds wheat bran...
100 pounds wheat middlings (white of flour).
100 pounds ground oats, standard or better.
100 pounds corn meal, pure.
100 pounds meat scraps, 50 per cent protein.

The above dry mash contains considerable variety, the ingredients are readily obtained, and, being in 100-pound quantities, can be readily mixed. This dry mash contains 18.2 per cent of protein and 39.9 per cent of carbohydrates. This makes the nutritive ratio for the mash 1 to 2.8.

Supplementing this dry mash the competing fowls were given morning and night, in deep litter, this grain ration:

100 pounds wheat.
100 pounds cracked corn.
100 pounds clipped oats.

This grain ration has a nutritive ratio of 1 to 8.2.

All feeding was in the hands of expert, practical men who were experienced with both heavy and light breeds. Identical rations were fed to all competing pens. During the pullet year the 1,000 birds consumed an average of 41 pounds of mash and 38 pounds of grain, or practically equal amounts of each. This may be a revelation to many poultry feeders, for in the past it has been generally supposed that laying birds should eat nearly twice as much grain as mash.

One of the most important and practical results from the contest is the fact that hens can be kept laying heavily during the middle and late summer and well into autumn if the amount of grain fed is materially reduced, compelling them to eat more mash. The mash contains more protein, egg-forming material, and also is the cheaper part of the ration.

To keep the eggs coming plentifully after midsummer, we are feeding in our Vineland contest more than double the quantity of mixed grain from July to October than we feed during the late fall, winter, and spring months. For example, from November to April from 10 to 12

pounds of grain are fed daily to each 100 hens, and from July to October not over 6 pounds to 100 hens. This sharp reduction of grain causes the hens to double their consumption of mash, the result being continued laying when otherwise they will loaf or begin to molt.

During 1916-17 the prevailing market price for food was such that the mash cost \$2.70 per 100 pounds, and the grain \$3. On the basis of the amount consumed this meant a total feed cost per bird of \$2.26. These prices are based on all purchased feed, and are interesting and encouraging, for they show that even during periods of extremely high feed prices, such as prevailed in the winter of 1917, hens can be fed for approximately \$2.25 per year for grain and mash. During the second or yearling years the amount of feeds consumed was slightly less, and owing to a drop in feed prices the cost of feed was quite materially reduced. Before leaving the feed problem it is interesting to note that the average amount of feed required to produce a dozen eggs was 6 pounds. In the case of pen No. 88, which produced 221 eggs per bird, it required but 4½ pounds of feed to produce one dozen eggs.

During the spring of 1918 each contestant furnished a breeding male to be mated with his pen at the contest. In March and April, 8,619 eggs were incubated from the 1,000 birds, with the remarkable result that 87.9 per cent of those eggs incubated proved to be fertile and 53.1 per cent hatched.

Considering the fact that all eggs were pedigree hatched in cheesecloth bags to keep the chicks separate, this is quite a remarkable performance. A careful study of fertility and hatchability from eggs laid by heavy-producing and low-producing hens seems to show that there is no relation between high production and good

or poor fertility and hatchability. For example, the White Plymouth Rock hen which laid 301 eggs shows 100 per cent hatchability of her eggs, with exceptionally fine livability of chicks. Some other hens which laid remarkably well did not show up as well in the vitality and hatchability of their eggs. But the same was true with low-producing hens. The fertility and hatchability of an egg seems to be related more to some quality which enables the hen to impart pronounced vigor and stamina to the germ in the resulting progeny. This ability is not influenced by the amount of her production. It may be safely stated that heavy producers make just as good breeders as medium or low producers, as measured by fertility, hatchability, and growth of chicks. The 4,000 odd youngsters which were hatched from the eggs set were brooded under colony breeding stoves, and reared on an alfalfa range. They were given buttermilk to drink for the first ten weeks, and were given powdered buttermilk in the mash during the entire growing period. It is true that they were reared under ideal conditions, and it is also true that they made a remarkable growth. At eight weeks of age the average pullets and cockerels of the American breeds weighed 1.8 pounds each. At twelve weeks of age well developed specimens weighed between two and three pounds on the average. This remarkable growth was mainly due to the fact that the young chicks were given plenty of green range to run over and plenty of skim milk to drink. No one raising chicks should ever attempt to raise youngsters on small, bare yards and in close confinement. There is no place like the farm, with unrestricted range and plenty of green fields.

Teaching the Youngsters to Roost

By R. G. Kirby

SEVERAL years ago, while visiting a large commercial poultry plant, I noted small roosts erected in the colony houses for birds not more than six and eight weeks old. The poultryman had started to teach the young chicks to roost, although they were hardly old enough to leave the protection of the stove brooder. Since then I have tried to teach our chicks to roost at an early age, and find that it has many advantages.

After the chicks learn to roost, all danger from overcrowding is over. Overcrowding causes colds, due to the heating at night and the quick chilling which follows when the chicks run out on the ground early in the morning. After the chicks learn to roost it is easier to protect them from mites and lice. Mites may easily become established in a brooder-house floor, and then they are difficult to exterminate, but if the chicks are on roosts and the roosts are occasionally painted with kerosene oil or other good disinfectant it will practically eliminate the mites.

If brooder chicks are not taught to roost after they leave the protection of the artificial heat, they will always crowd into the corners when settling down for the night, and this causes a devitalizing effect on the weaker members of the flock. We often think that little chicks are rather senseless in this matter of crowding, but they are simply following their natural instinct. From the time they were hatched they have always gone under the hen at night, and after they get older they still try to keep it up. With the hen gone they crawl under each other, consequently getting themselves into a small corner of their enclosure, and the one underneath will probably smother.

To prevent such danger, I find that wire-mesh-covered frames made to fit the corners, with an incline of a foot above the floor, keeps the chicks from piling up, and allows air to circulate below the chicks that sleep on the frames.

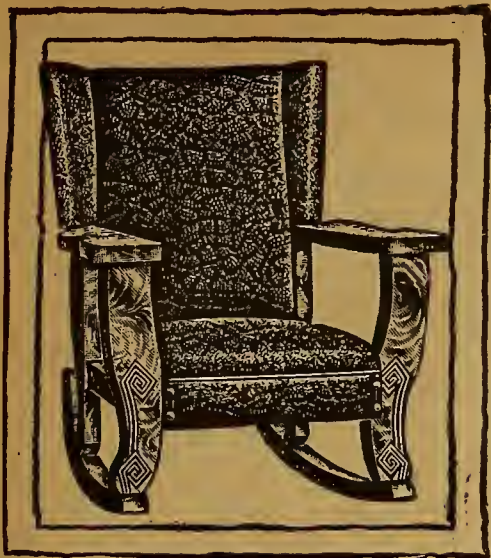
Not over three inches above the highest part of the wire-mesh incline I place roosts, and the chicks soon get the habit of roosting.



Harry R. Lewis

Tricky Biddy is Found Out

SOME hens are like some humans—very deceiving. Scientists have spent years finding out how to spot deceptive humans at sight, and passing along the information in books. But it remained for Prof. Harry R. Lewis of the Poultry Husbandry Division of the New Jersey Experiment Station to spend several years studying deceptive hens so we can pick the good-looking, worthless barnyard queen who won't lay many eggs, and do it at sight. What he says is based on several years' tests at Vineland, New Jersey, and means money in your pocket if you take advantage of it. THE EDITOR.



Quartered and Solid Oak Rocker
Pay Nothing Until 60 Days

Put this splendid Rocker in your home on 30 days' free trial and see what a wonderful bargain it is. So comfortable for a long winter evening—such a handsome addition to your furnishings. Frame is kiln-dried hardwood. Arms and front posts genuine quarter sawed oak—all in handsome golden oak finish. Seat has 4 springs supported on tempered steel bands. There are also six 5-in. pillow springs in back supported on steel bands. Filling is wood fibre and cotton felt. Upholstered in handsome imitation Spanish Brown leather. Height seat from floor 17 in. Back from seat 25½ in. Seat is 19x19 in. Width over all 30½ in. Neat carving on front. Comfortable side wings. Shipping weight about 40 lbs. Shipped from our factory in western New York state or from our warehouse in Chicago. Order by No. 98AMA19. Price \$6.88. Pay nothing until 60 days. Then only \$1.18. Balance \$1.14 every 60 days.



Sanitary Indoor Toilet
Pay Nothing Until 60 Days

You must actually put this wonderful, new sanitary convenience in your home to realize what a comfort it is. And to let you prove it we will send it for 30 days' free trial—and this offer really means free. Don't keep the closet unless you find it as serviceable as the costly toilets in the best equipped city homes and hotels. Put it where most convenient. Connect ventilating pipe with outside flue—or directly through roof if there is no flue. No water connection to make. Automatically disinfects contents with powerful chemical. Made of strong sheet metal. Seat golden oak finished. Has hinged cover. Large inside galvanized retainer. Strong ball and close-fitting lid. Need be emptied only occasionally.

All Accessories Included

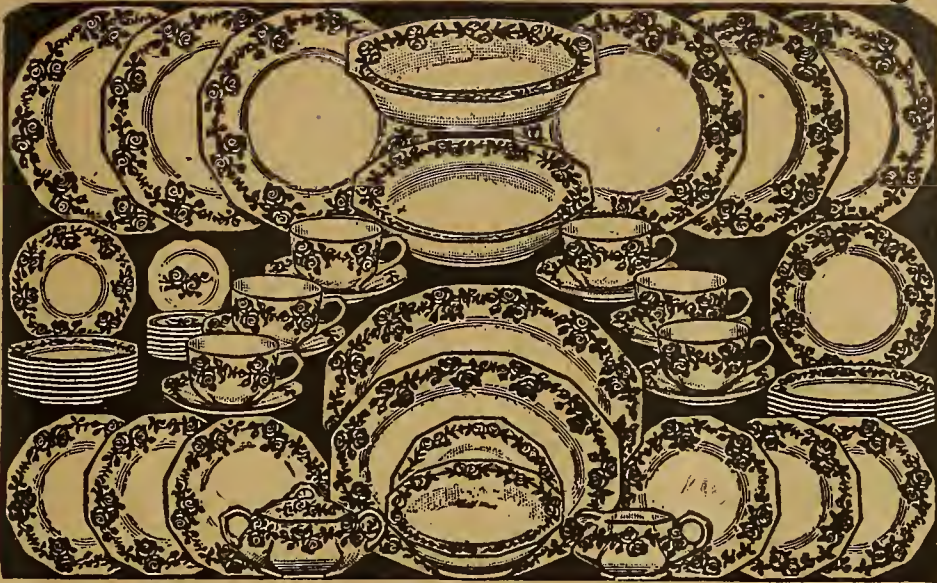
With closet we send 6-months' supply of chemicals for average family. (New yearly supply costs only \$1.75) 2 rolls toilet paper and holder; four 2-ft. sections of 4-in. enameled ventilating pipe; 1 enameled elbow; 1 disc; 1 metal shield. Costs less than 1 cent a week per person to use. Try it 30 days free. See what a comfort it is. Keep it only if satisfactory.

Order by No. 229AMA52. Price \$17.85. Pay nothing until 60 days. Then only \$3.00. Balance \$2.97 every 60 days.



THE HARTMAN CO. 4039 LaSalle Street
Dept. 1648, Chicago

A Whole Year to Pay

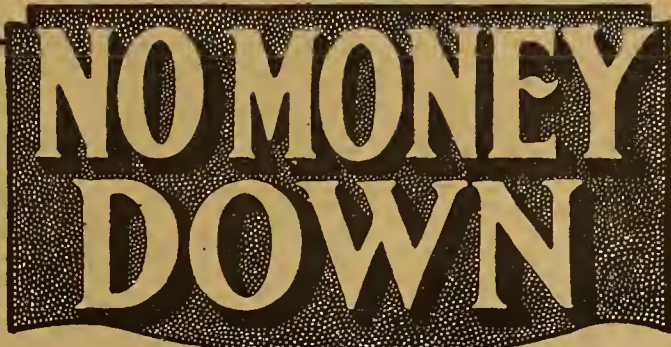


51-Piece Dinner Set

Rose Border Design Pay Nothing Until 60 Days King George Period

This beautiful 51-piece Dinner Set sent absolutely at our risk—to use on 30 days' approval, with a year to pay if pleased. Nothing to pay until 60 days. Pattern derived from the heavy gold treatment of King George period. Rich in appearance and with a border of trellis roses so heavy as to be almost incrustated, yet fine in texture, setting off the beautiful Colonial shape. Materials are very durable, highly glazed and fired; decoration being placed on each piece before the final glazing is executed. Correct number of pieces to constitute a complete service for 6 persons. There are 51 pieces in all, consisting of 6-9¼-in. Dinner Plates, 6-7¼-in. Pie Plates, 6-8¼-in. Soup Plates, 6 Cups, 6 Saucers, 6-5¼-in. Fruit Dishes, 6 Individual Butters, 1-10¼-in. Meat Platter, 1-13½-in. Meat Platter, 1-Sugar Bowl and Cover (2 pieces), 1-Creamer, 1-7¼-in. Salad Bowl, 1-8¼-in. Round Vegetable Dish, 1-8-in. Oval Vegetable Dish, 1-9¼-in. Round Fruit Bowl. We guarantee safe delivery, carefully packed. Shipped from our Chicago Warehouse. Shpg. wt. about 40 lbs.

Order by No. 325AMA12. Price \$10.88. Pay nothing until 60 days. Then only \$1.83. Balance \$1.81 every 60 days.

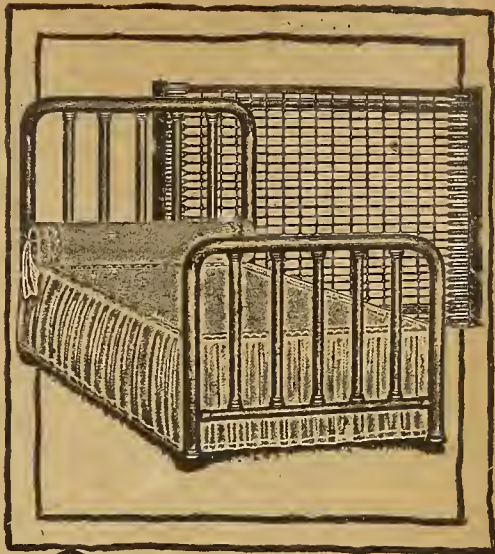


Pay Nothing Until 60 Days

Not a penny now. Pick out what you want from the items on this page and send only the coupon. When the article comes, use it 30 days on absolutely free trial. If not all you expect and an amazing bargain, ship it back and we pay freight both ways—the trial costs you nothing. If you keep it, make first small payment 60 days after arrival—take a whole year to pay on the Hartman easy payment plan. This is the logical, sensible way to furnish your home and equip your farm. Deal with a house that trusts you and has a capital of \$12,000,000 to back every offer it makes. Just send the coupon—no money.

Hartman's Bargain Catalog
FREE!

which shows thousands of wonderful offerings for the home and farm. 76 bargains in Rockers. 11 bargains in Parlor Suites. 28 bargains in Davenport. 71 bargains in Dressers and Chiffoniers. 22 bargains in Metal Beds. 17 bargains in Dining Tables. Then bargain after bargain, thousands of them, in rugs, curtains, furniture of all kinds; stoves, ranges, dishes, silverware, jewelry, clocks, washing machines, sewing machines, kitchenware—the greatest offerings ever made. Gas engines and cream separators, grinding mills, tool grinders, feed grinders, corn shellers, saws, saw frames, concrete mixers, farm carts, cider mills, sprayers, hog oilers, cultivators, general farm machinery, etc. Get this great Bargain Book. Hundreds of pages in actual colors. Postcard brings it FREE, prepaid.



Full Size 3-Unit Complete Vernis Martin Bed
Pay Nothing Till 60 Days

Refined design—sanitary and sturdy, 3-Unit construction. Special corner device on spring which gives utmost rigidity and perfect alignment. Oval side tubes, stronger than round, are another feature. Spring has 6-in. rise and 1½ in. band edge. A light weight high quality handsome, cold rolled harnished steel bed complete. The steel surface is bright, smooth and highly polished. Handsomely finished in Vernis Martin (gold bronze) Head end measures 49 in. high; foot 32 in. Full size bed 4 ft. 6 in. wide. Lighter than iron. 11-16 in. continuous pillars. Bottom tube and fillers ¼ in. Shipping weight 75 lbs. Order by No. 155AMA3. Price \$14.78. Pay nothing till 60 days. Then only \$2.48. Balance \$2.46 every 60 days.



Royal Easy Chair

Press the button on the right arm and back automatically adjusts itself to position that best suits you. Foot rest is out of sight when not in use and in foot rest is hidden basket for newspapers, magazines, etc. Upholstered in imitation Spanish brown leather; 8 springs in seat. Frame 23 in. high; 29½ in. wide; 26½ in. deep (outside measurements); Seat is 20½x20½ in. Length reclining 43½ in. with foot rest extended 64½ in. Golden oak finish. Shipped from Chicago warehouse. Shipping weight 95 lbs. Order by No. 83AMA8. Price \$19.95. Pay only \$3.35 in 60 days. Bal. \$3.32 every 60 days.

Majestic Engines

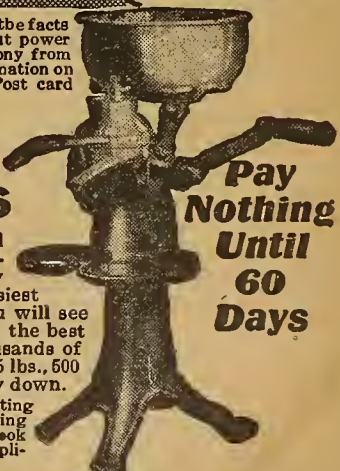
Pay Nothing Until 60 Days
Before you buy an engine get the facts about the wonderful Majestic—the engine that gives you full rated horse power at least cost for fuel. Sent on 30 days' free trial. Nothing down. We let the Majestic prove its worth on your own farm. Then you decide for yourself. Keep it only if satisfied it is the best engine of all. All sizes from 2 to 14 horse power.

Free Book filled with just the facts on the farm and remarkable testimony from 501 farmers everywhere. Full information on bargain prices and easy terms. Post card brings both books free.

Majestic Separators

Accept our 30 days' free trial offer on the Majestic Cream Separator and see for yourself how it adds to your dairy profits. Easiest running, closest skimming. You will see when you try it. Keep it only if the best separator you ever used. Thousands of farmers testify for it. 4 sizes, 375 lbs., 500 lbs., 750 lbs., 1000 lbs. No money down.

Free Books Catalog quoting record breaking prices, easiest terms ever made and book of 501 testimonials that never was duplicated. Post card brings book free.



Pay Nothing Until 60 Days

THE HARTMAN CO. 4039 LaSalle St. Dept. 1648, Chicago

Send me merchandise marked X, it being understood that I am to have the use of it for 30 days and if for any reason I do not want to keep it, I can return it at the end of that time and you will pay freight both ways. If I keep it, I am to make first payment 60 days after arrival. Balance in five equal amounts every 60 days.

<input type="checkbox"/> Vernis Martin Bed No. 155AMA3	<input type="checkbox"/> Royal Easy Chair No. 83AMA8	<input type="checkbox"/> Upholstered Rocker No. 98AMA19	<input type="checkbox"/> 51-Piece Dinner Set No. 325AMA12
<input type="checkbox"/> Sanitary Indoor Toilet No. 229AMA52	<input type="checkbox"/> Information About Majestic Engines	<input type="checkbox"/> Information About Majestic Separators	

Name.....
Address.....
Nearest Shipping Point.....
☐ Send me Hartman's Bargain Book FREE. (If you don't send this coupon, a post card will do.)



Champion

Dependable Spark Plugs



Avoid Substitutes Look for "Champion" On the Porcelain

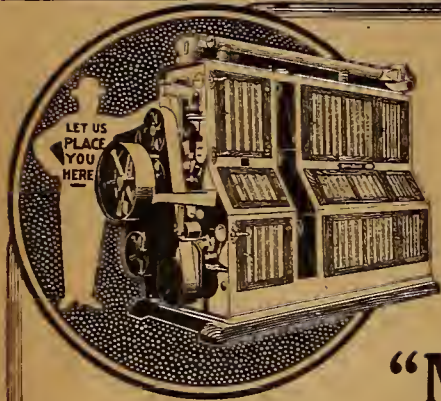
Besure the name "Champion" is on the porcelain as well as on the box.

Most dealers call your attention to the name "Champion" on the porcelain when they recommend this make of plug.

There is a Champion Spark Plug for every type of motor car, motor truck, tractor, motorcycle and stationary engine.

Champion
Heavy Stone
Price \$1.25

Champion Spark Plug Company, Toledo, Ohio



**\$500 to \$1000 Profits
Per Month**

being made with the
American

"Midget" Marvel

Self Contained, One Man, Roller Flour Mill

The surest and most profitable business in the United States and second in dignity only to banking.

Be the Flour Miller in your community and own this new, improved mill which is revolutionizing milling. You can start in this profitable business at once with our nationally advertised brand of flour as your own.

FLavO (America's) FLOUr
(Community)

Our Service Department and Confidential Selling Plans will establish you in this business and make you a success.

This wonderful mill will make a yield of 42 lbs. of good flour per bushel of clean wheat. Built to last a lifetime. Guided by our book of instructions, it can be operated by anyone without previous knowledge of milling. Takes small amount of power. Its greatly improved system of milling makes "a better barrel of flour cheaper;" therefore gives you larger profits.

Grind your home grown wheat and sell it to your home people with this mill. Made in 7 sizes—from 15 to 100 bbls. per day. You can get into this money making business with as little as \$3000. Sold on 30 days' trial.

Write today for our free booklet, "The Story of a Wonderful Flour Mill."

The Anglo American Mill Co.

530-536 Trust Bldg.

Owensboro, Ky.



Shall I Buy a New or a Used Car?

By Jerome T. Shaw

BUY a new automobile" is the advice offered by the veteran car owner to the prospective motorist who is contemplating the purchase of a used car. Every year thousands of persons join the army of motor-car owners over the used-car route; and, while many have been perfectly satisfied with the preliminary experience gained at the wheel of a car that has had its "breaking in" at the hands of others, there are a great many more who have a different tale to tell. It is certainly worth the time of the would-be motorist to balance carefully in his mind the advantages and disadvantages of having a new or a used machine represent his first car purchase.

If he has no car-owner friend to advise him, or if he is ignorant of the simplicity of operation and maintenance of the present-day automobile, he will, in the majority of cases, first think of the used car as a good vehicle "to learn on." This might have been a logical step some years ago, when cars were not made so fool-proof, and when their operation required more than casual skill and consideration. Now, however, the "learning" can be acquired in half an hour, with the coaching of a competent demonstrator. That, with a knowledge of the gear shift—and there are cases where even this is not necessary—and the primary principles of the starting system—turning the switch—and the owner is practically independent in the handling of his car.

Assuming that he does purchase a used car, he has but one important factor in his favor. That is low depreciation. If he buys a car that is two years old, it has already lost about 60 per cent of its market value; that is, if it originally listed at \$1,000 it should be now worth in the neighborhood of \$400. After the third year its rate of depreciation is not so great, and the owner may take this two-year-old car, run it for another year, and then sell it for 20 per cent under what it cost him. In other words, he could have the use of the car for one year for about \$80 under normal conditions. If he bought a new car in the same price class, it would have depreciated about 40 per cent—\$400—at the end of the first year's service. That \$80 against \$400 is the big thing in the favor of the used-car buyer. But—

During the year that he has had the used

car he has had no guaranty from the seller that it would stand up, and it is more than likely that defects which were not apparent at its purchase have become painfully and expensively obvious after the first few months of service. Used cars rarely carry complete equipment; and to get the real joys of motoring it is necessary that the car be fitted with those devices that tend to add to the comfort and convenience of the owner and his guests. Many of these are included as standard equipment with the new car; but the used-car buyer has to add their cost to the original amount.

Used-car advertisements calling attention to the "good" condition of the tires are common, but one seldom sees "all new tires" mentioned. "Good" in the tire world covers a variety of qualities which, when measured in mileage, may range from 300 to 1,000 miles. Six Sunday trips of 150 miles each, and the used-car buyer has to buy again. At this rate the difference between the \$80 and the \$400 mentioned above is soon taken care of, and the used car's biggest favorable factor is wiped off the slate.

Just as soon as a new car is driven away from the dealer's salesroom by the purchaser it becomes a used car and depreciates 25 per cent in value, and at the end of the year it will be valued at 60 per cent of its original list price, or thereabouts.

During this year, however, the owner has had the service facilities of the manufacturer and dealer at his call—a generous portion of it without cost to him; he has had the maker's guaranty back of his car for ninety days at least; he has had a car completely equipped with new accessories and attachments; and his tire expense has been proportionate with the use of his car.

In addition to these advantages over the used-car buyer, he has a car that still retains an appearance of newness, and one that, with due care, should be in better mechanical condition than when in the first flush of its youth.

To the man who is determined to become a motorist and who is not limited in his finances, an analysis of the new and used-car factors and problems emphasizes the wisdom of the experienced owner's advice:

"Buy a new automobile."

Don't Get Panicky About Your Liberty Bonds

AS WE sit down to write this, Liberty Bonds are quoted on the market at 94; and, in common with a lot of other folks, we have been curious to know why, with the war won, we should be offered only \$94 for the government securities we paid the full par price of \$100 to get.

A little investigation brought the answer to light and, with Liberty Bonds already in our lockers and the final Liberty Loan for \$5,000,000,000 looming before us, we make haste to tell you why they are good things to hang on to and to buy more of, despite the low quotation on the market.

The week before the armistice was signed on November 11th, the market price of these bonds was 98. Some time before that they had been selling at 96. You'd naturally think that with the armistice signed the price would go up from 98 instead of down to 94, especially after the Government announced that it would have to ask for only one more loan of \$5,000,000,000 now that the great world war is over, instead of the \$9,000,000,000 it had planned to ask this year if the war had gone on.

But history repeats itself in bond issues just as it does in everything else. United States six per cent bonds of the Civil War sold at 11½ a couple weeks before Lee's surrender. After he surrendered they dropped to 105. British consols, the record shows, went lower after Napoleon had been put out of business by the English at Waterloo.

The answer to this strange performance seems to be the same on all occasions. It is simply this:

When a war is ended, a lot of people who loaded up on war bonds purely out of patriotism, and often on borrowed money, will, with the spur of patriotism removed, want to unload. They want the cash. If they don't need the cash they are foolish to sell their bonds.

If you sell your Liberty Bonds now, you lose. They will go to par, unquestionably; probably they will go far above it. Thousands of men got rich during the Civil War by buying all the bonds they could get at the low quotation, and holding them until they went way up months after the war ended. Unless you are mighty hard pressed for cash, it is good business to hold tight to your Liberty Bonds. Even if you must have cash it would be better to put up your bonds as security and borrow the money, rather than sell the bonds themselves.

In 1866 United States bonds sold eight per cent above the low price they were quoted at immediately after peace was declared. After their decline in 1815 British consols sold at an advance of 11 per cent within the twelvemonth. Both these securities went far, far above that within a few years.

We came pretty near getting scared about these Liberty Bonds ourselves, but we're not scared now, because we've got the facts; and we pass them along in the hope that they may clear up the situation for some of you Farm and Fireside folks.

THE EDITOR.

\$1475

F. o. b. Racine



Mitchell
Sixes

Wheelbase 120 inches
Long-stroke Six motor
Cylinders $3\frac{1}{4} \times 5$
Tires 34 x 4

A Completely New Six

Over 100 New Standards—75% More Endurance

The war has enabled us to do in 18 months what we might have spent years to accomplish. The great Mitchell factory was given to truck building. Our engineers and specialists had 18 months to bring out a new Mitchell, built to new standards.

The result is that now we are able to offer our new conception of a lasting Six. There are more than 100 improvements, 50 per cent added strength, 75 per cent more endurance, 25 per cent more economy and 20 per cent greater beauty and comfort.

It Had to Come

Two years ago we decided, for our part, that the Light Six type should be bettered. It had been too light. Experience had shown that the boasted over-strength was too often under-strength.

Fierce price competition had forced makers to skimp. Then ideas were changing. Buyers bought their cars to keep, and they looked for many years of service.

The Mitchell was great and successful. In 14 years it had won a world-wide fame. But we knew that all Light Sixes, including the Mitchell, must adopt new standards to meet new-day expectations. And we started then to make our preparations.

New Specialists

We added to the Mitchell staff many new specialists. These were men who had made their mark in high-grade car construction.

Then came the war, and with it came their unique opportunity. For 18 months, while we built trucks, they worked on this new model.

They made over 100 important improvements. Part by part they added an average of 50 per cent more strength. They spent over \$250,000.00 for new machines and equipment, just to build parts better and to test them better. They created a staff of 135 trained inspectors, to measure and test and insist on perfection.

The result is this new-standard Mitchell, combining 100 of the greatest advances that ever were made in Sixes.

New From End to End

The design is new, the color and the top. The radiator is larger, and the wheels, with 34x4-inch tires.

The steel frame is deeper, adding 50 per cent to the strength. Rear axle strength is increased 50 per cent, brake efficiency 75 per cent. The gears are 25 per cent stronger by actual crushing test.

There is a new-type disc clutch. There are 123 drop forgings. Chrome-Vanadium and Chrome-Nickel steels are lavishly used in construction.

The ball-bearing steering gear is made 10 per cent stronger. Our new crank shafts show a tensile strength of 150,000 pounds per square inch. They are perfectly balanced on two costly machines.

Gasoline Saving 25%

Gasoline and oil cost is reduced 25 per cent. This largely comes through the use of a thermostat to regulate the water system. It controls the temperature of the air, liquids and gases. The carburetor intake is twice better heated, so the gasoline is vaporized and combustion is complete.

To make staunch bodies we use frame material costing twice the usual. We use interlaced hair in the upholstery. We use four coats of varnish, instead of the usual two, to double the life of our finish.

We give ample room with a 120-inch wheelbase. Compare that with other 5-passenger Sixes.

But one part could not be bettered—our long cantilever rear springs. Out of 40,000 now in use, not a spring has broken. And they have made the Mitchell the easiest-riding car in its class.

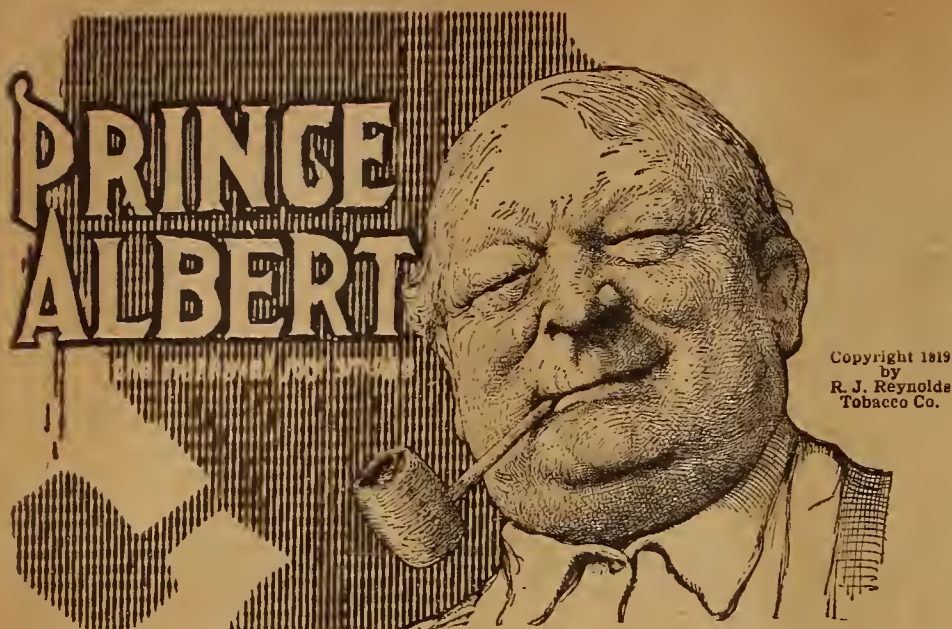
Undersells All Rivals

This new Mitchell, despite all these new standards, still sells below all comparable cars. That is due to our wonderful factory efficiency which has made the Mitchell plant famous. We build the complete car—chassis and body—under scientific methods, which reduce labor cost to the minimum.

Write us for further details. Then go over this new car, part by part, with your nearest Mitchell dealer. When you know this car, you will want this new strength, new endurance, new beauty, new economy.

Mitchell E-40

Price, \$1,475, f. o. b. Racine
Wheelbase, 120 inches, 40 horsepower
Six-Cylinder Motor
Cylinders $3\frac{1}{4} \times 5$. Tires, 34 x 4.
3-Passenger Roadster, same price
We also make Touring Sedan



Copyright 1919
by
R. J. Reynolds
Tobacco Co.

Get going right with a jimmy pipe!

You'll have a streak of smokeluck that'll put a lot of happiness in your life if you'll start in with a jimmy pipe and some of that more-ish Prince Albert tobacco.

You never will get real top notch smoke enjoyment until you can call a pipe your pal, *then*, to get pipe pleasure at its best you land square on that two-fisted-man-tobacco, Prince Albert!

Quality makes Prince Albert so different, so appealing all along the smoke line. Men who never before could smoke a pipe and men who've smoked pipes for years all testify to the delight it hands out! P. A. meets the universal taste. *That's why it's the national joy smoke!* And, it can't bite or parch. Both are cut out by our exclusive patented process!

Right now it's time to turn over a new leaf. You take a tip and get out your old jimmy pipe and land on some P. A. for *what ails your particular smoke appetite!*

You buy Prince Albert everywhere tobacco is sold. Toppo red bags, tidy red tins, handsome pound and half-pound tin humidors—and—that classy, practical pound crystal glass humidor with sponge moistener top that keeps the tobacco in such perfect condition.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C.



How Miss Williams Solved the High Cost of Living



"Oh! If I could only do something to help, in these trying times!" That is the problem that confronted Miss Williams only a few weeks ago. *Farm and Fireside* has given her the answer. She is now earning \$35 each week.

Miss Williams saw that sooner or later the growing demands upon the family pocketbook would leave a very small margin for pretty new clothes and the many other things a normal girl likes to have. She determined that if there was a way to get these things without depending on "dad"



she would find it. In investigating our proposition, she saw that it offered her just the opportunity she was looking for—that, besides being remunerative, it afforded a dignified, healthful and extremely pleasant occupation. Her earnings now exceed her fondest expectations.

You, Too, Can Earn \$35 Weekly!

There is nothing romantic or unusual about Miss Williams' success. Any ambitious girl or woman can do as well. Decide TO-DAY that you, too, are going to help "dad" or "hubby" meet the increased living expenses.

Gentlemen:

Without committing myself in any way, please tell me your liberal plan for making money.

Name

Post Office

State.....St. or R. D.....

Let us explain, without obligation to you, our unusual money-making proposition. Even if you can spare but an hour or so a day, it will pay you well. Send the attached coupon by return mail.

Get Started NOW!

FARM AND FIRESIDE
SPRINGFIELD, OHIO

How I Fell in Love with My Wife

[CONTINUED FROM PAGE 11]

The While She Chased a Pig

THE very first time I saw her she was chasing a pig around the farm, and the way she went at it meant business. And she caught it too. She had golden hair, with two long braids hanging down her back, and was pretty good to look at, and when she stubbed her toe and grabbed the pig around the waist and I laughed she was boiling mad and stamped her foot at me. I fell dead in love with her, and went in and hired out to her aunt. Well, she would not look at me for a long time, but I won her in the end. D. C. F.

Quick Work—After Thirty-seven Years

I MARRIED my wife for love. Thirty-seven years ago the woman I was married to said to her: "Well, after I die you can have George for your husband." She said that was a bargain, so time drifted on for thirty-seven years. I went west; was gone for that number of years. She got married, still lived in the same town. Her husband died; the woman I was married to died thirty years before her husband.

I had many chances to get married, but still stayed single; so while I was in Colorado one night she came in my mind, and I said I will just drop a line to see if she is still living. I did. Behold, I got a reply that she had lost all of her family, also her husband.

Then I said to myself, maybe we can have each other yet. So I came from Colorado to New York, went and called on her, and the first night I popped the question, and the next evening we were married.

That was the twenty-fifth of July, 1917. At the present time neither of us have any of our family living. We are trying to live for each other, and hope our declining years may be spent in happiness and love for one another until God calls, which we will have to answer, and then this romance will be ended. G. L. and V. R.

When East Met West

THIS romance is guaranteed a genuine article. I was a "wild and woolly" Westerner; she was a "finished" Easterner. I was working in the office of a small Western newspaper; she was a school teacher on a summer vacation visit to Western relatives. We met at a village picnic.

I discovered that her idea of the West was a picturesque country with Indians on the warpath, cowboys riding madly through town, shooting out window lights, and bewhiskered Populists shouting for William Jennings Bryan. I thought all Eastern girls self-satisfied prigs, with a Bostonese accent and a copy of Emerson's essays for breakfast. We were both nineteen—the moonstruck age. Can you beat it for romance?

Well, we spent the entire six weeks of her visit arguing the comparative merits of East and West. I donned flannel shirt and sombrero, hired some bucking bronchos, and took her on "fireman's drives" across the prairies. She paraded the dusty streets of our pioneer town in her fluffiest ruffles, with a parasol in one hand and a copy of "The Outlook" in the other. Of course, we fell in love. How could we help it? And, of course, we got married. Blamed poor show for happiness if we had been what we seemed! But we weren't.

We lived five years in the West, until she found out that a Westerner is just like an Easterner, only a little more "darned" independent. Now we've lived two years in the East, and I've found out that Easterners are not so superior as they think they are. We bounce over the New York hills in our trusty little car, and like each other just as well as in the days of romance. But we know now that folks are just folks wherever you find them. H. H. H.

She Made Him Hate Her Rival

WHEN I married, I married because Inez, in my opinion, possessed the most queenly beauty of any woman in the country, and she married me because she loved me.

Very soon after we were married Inez began to have bad health, and of course she lost her beauty. I soon found I didn't love her, treated her cross, and would go

to town on Saturdays and stay until midnight.

Very soon I became interested in my neighbor's wife. She was always neat, and of course it made her pretty to others. Sometimes I would think what I would give to just have Inez come around me and not complain of her aches.

Inez soon suspicioned that I was interested in Mrs. W. One day she came to me and said: "Why do you seem to care so much for Mrs. W.?"

I replied: "She is neat, and it makes her so pretty." She didn't say anything, but left the room. I knew she was determined to win me from Mrs. W., which she managed nicely.

That afternoon she met me at the door with herself very much changed, looking so pretty in her neatly fitting evening dress—though I pretended not to notice the change.

Now we are living happily, and it is all due to Inez' not being silly when she found I was in love with Mrs. W. Of course, she invited her to our house, began to dress like her, and everywhere she went she took Mrs. W. with her, until I grew sick of Mrs. W., and one day drew Inez in my arms and said: "Dearest, don't wring the core out of my heart. I don't love any woman but you. I despise Mrs. W., and thank God, dearest, for you." R. G.

Peeking Through the Corn

I MET her first in my cornfield. She had walked down there after her school was out and her scholars had walked loiteringly home, swinging their dinner pails. I with my tattered shirt sleeves and baggy yellow overalls was picking seed corn, and was not in the least prepared for a visit from the new schoolmarm.

Several mornings since her arrival one week before, Fred, my kid brother of sixteen, had boastfully told of something she had said to him. And each night of late he had hurriedly milked his cows, and by the time I got in the house had already skipped with two big apples or a pocketful of plums down to Gleason's, her boarding place. I rather resented this, for he never gave anyone else a chance, but simply monopolized her from the first.

A rustle in the corn leaves, a startled exclamation, and then I saw "her" standing there before me. For just a second the brown eyes, bright as an eagle's, drooped, and then, while I vainly searched for words she said: "Oh-h! You are just the one I wanted to see. You are one of the Stew-borg boys, the one that used to teach here, aren't you? Do please tell me exactly what these prop roots are for, and don't you really think that it's too early to pick seed corn?"

She fairly bubbled over with talk about corn, and after a little I forgot my shyness and was able to talk a little too. Where had I ever seen a teacher before that knew the difference between No. 12 and No. 13; that knew the least thing about corn, or even cared to learn? And corn had been my pet hobby ever since I had come back to the farm after my high-school days. Certainly, this was the first.

One delightful hour sped so quickly, and together we had planned a community fair, discussed the possibilities of a farmers' club, and she told me more about the activities of our county agent, who had been appointed in July, than any farmer in our district knew.

She took a short-cut home across my field and pasture, and somehow I felt that the sunshine was gone and I'd have to follow it. Why did I keep thinking about the feet that made the fresh tracks across my field? Was it because it was a pair of boys' shoes that shod them? Perhaps; but just as I reached the gate I saw her crossing the creek, barefoot, with the shoes dangling in one hand and the stockings in the other.

It was then and there that I decided that she was the girl I wanted—the one who carried a jack-knife and some nails in her sweater pocket instead of a powder puff; the one who wore boys' shoes to school instead of French-heeled pumps; the one girl that knew more about corn than about algebra, and was not afraid to walk barefooted across the creek.

That night it was I that milked my cows a little early, left the house in a panic, lest Fred see me, and with two big red apples in my pocket joyfully wended my way down to Gleason's. A. D.

The Man With a Limp

[CONTINUED FROM PAGE 58]

'Pass, patrol!' he called; and, in turn, each of the others called out, 'Pass, patrol!' 'Pass, patrol!' 'Pass, patrol!'

"How near to madness I was, there at Lichtzau, you may know when I tell you that of all the things which I hated in the German army, and of all the things from which I strained to escape, the calls of those sentries had become uppermost in my mind.

"A small thing to drive one mad, was it not? I came to wait for those calls, every fifteen minutes of every hour of every day and night, and to echo them and mumble them, and to worry lest some one of the sentries might fail to sing out, 'Pass, patrol!' The thing became an obsession. By the time my last day of service drew near it had come to mean nothing more to me than that it would be the last day on which I must hear that ever-recurring refrain.

"At last that night arrived—the night that marked the end of my service. That night the weary, despondent Krantz paused on his beat, leaned for a moment's rest against the mossy wall of the castle, and slept.

"'Pass, patrol!' came from the first sentry. 'Pass, patrol!' 'Pass, patrol!' echoed the other two. There on my bed, in nervous agony, I listened for the last of the four calls; but Krantz slept on."

Minch paused to draw at his pipe; and it was only after several attempts that he realized that it was out. He moved as if to relight it; but so absorbed was he in the memories of that other time, he allowed the match to die.

"For Krantz, a reprimand only, and one little punishment."

"One little punishment!"

"Only this: Once every hour, for twenty-four hours, he must put on his entire equipment, cleaned and burnished for inspection. He must put the entire equipment on his horse, and clean the beast, and present himself mounted for inspection to the officers of the guard. That done, he must each time return his horse to the stables, strip him, and then go to his own bed for such few minutes as were left of the hour.

"Such patient malice to have conceived that punishment! Put yourself to the task of washing your hands only once every hour for twenty-four hours, and under the fear-crushing knowledge that you must by no means be late. Add to that that you must polish your boots, because, coming from the stables, that must be done. Add yet the thousand and one other details—once every hour for twenty-four hours!

"Even now I can see those cruel pig eyes of the Prussian Ritter as, through the window of his office, he watched the Jew stalk back to his quarters from one of the last of those inspections—watched him as a carrion bird might have done, watched him hopefully for the first sign of breaking. And Krantz—he strode on, his body stiff, his legs stiff, with the approved military carriage—and fear and the madness of despair dragging at his heart.

"Not until Krantz had passed inside the barracks did Ritter turn from the window to finish his business with me. He handed me my pay, my railway ticket, and my discharge papers. At that instant I was through with the service. I almost ran from the room, so eager was I to get my few belongings and to put the whole hateful place behind me.

"My quarters were high up in the old barracks, and on the same floor as those of Krantz. I was not long about getting my few trinkets together, a matter of minutes only. But it was only so long that Krantz had had to remove his clothes, get into his bed, be up again, dress, and start on that eternal round of petty things which he had been doing each hour. He left his room just before I stepped from mine. He was just ahead of me through the long corridor and down the many flights of stone stairways that led to the ground.

"A bar of sunlight struck obliquely across his path. He paused at the window casement, a window through which the sun had poured its light when the Hohenzollerns were no more than money lenders in a back street of Nuremberg. The branches of the great spreading oaks beneath him hid from view the petty trappings of Empire. Birds sang, and flew hither and thither as they willed.

"And in that instant the Jew joined them.

"For the fraction of a moment I stood

horror-struck. Then I heard at my side the hoarse, angry bellow of Top-Sergeant Ritter. I forgot my horror of the thing in my rising hate for all that had made it possible.

"The fool!" I exclaimed.

"To jump! Ja, he is a fool to jump!" the top-sergeant snarled viciously.

"I whirled about in savage rage. 'Yes, a fool!' I snarled back at Ritter. 'None but a fool would have jumped—alone!'

"One must pay for such pleasures as was that speech of mine to Top-Sergeant Ritter. I paid. I will not tell you all of that. Enough that I had been marked to take the place of Krantz in the penitentiary. I knew I must leave the country. I forged a passport."

Minch shrugged his shoulders in an expressive gesture.

"It was a foolish thing to do—but it is as well that I did it,

"I aimed to cross the frontier at the town of Berlioz in Belgium. Thence I would go to England and thence to America. I got along swimmingly, too swimmingly. I should have known that if I were allowed to cross half of Germany without question it was because I was kept in view by other means.

"My heart was beating high when at last I found myself in the custom house at Berlioz. The town was on the very boundary between Germany and Belgium; in fact, the counter which divided the custom-house was on the boundary. The railway crossed there from one country to the other.

"The smiling Belgium customs official passed a joke with me about my future success in America. I stiffened my already straight military back. It was only so that I knew how to express power and strength and pride. I was equal to anything, and I was just about to tell the Belgian so, when I noticed the laughter gradually retreating from his eyes.

"A French gendarme had been standing near-by. I noticed that he gazed intently over my shoulder at something behind me. A chilling sense of danger crept over me, and I turned my head slowly and apprehensively. Then my heart sank, and I became again the fear-ridden creature that I had been during those three long years in the barracks. Only with an effort could I restrain my hand from lifting in salute, because there stood the top-sergeant, the Prussian Ritter, his evil little eyes blinking slowly and hopefully.

"Where might you be going, Herr Minch?" he purred softly.

"To Ostend, Herr Sergeant."

"You have a passport?" he asked solicitously.

"The moment had come. I hesitated. I could see the years of labor in the penitentiary stretching out before me. I determined to go through with what I had planned. I took the forged passport from my pocket and offered it to Ritter.

"A breath of wind, a moment's tremor of a finger—such little things may alter a life.

"A train whistled.

"En avant! Monsieur!" came the gay voice of the French gendarme; as one would say in English, 'Beat it, my friend; your train is leaving!'

"I thank God that there remained in me one spark of decision. I seized the passport from the floor with one hand, my bundle of luggage with the other. The smiling Belgian, quickly sensing the situation, pulled open the gateway through the counter. The French gendarme pointed me toward the already moving train. I jumped to the footway beside the guard and then looked back.

"There stood Ritter, erect and military as ever, his imperial mustaches pointing to high heaven and seeming to protest that such a thing must not be, that it was forbidden for men to jump on to moving trains. The Belgian and the gendarme waved a cheery farewell.

"I laughed one long, hearty laugh at Ritter, then waved my free hand to those friends of a moment. 'Vive le Belge! Vive la France!' I shouted.

"I thought I was free!

"But one does not become free by the mere crossing of a boundary. There came a day, at last, when I was tossed out of the immigration station into New York, turned loose on Broadway, on this very street below us. It was the day of a big parade. What parade I do not remember, but soldiers marched and crowds thronged about.

[CONTINUED ON PAGE 42]

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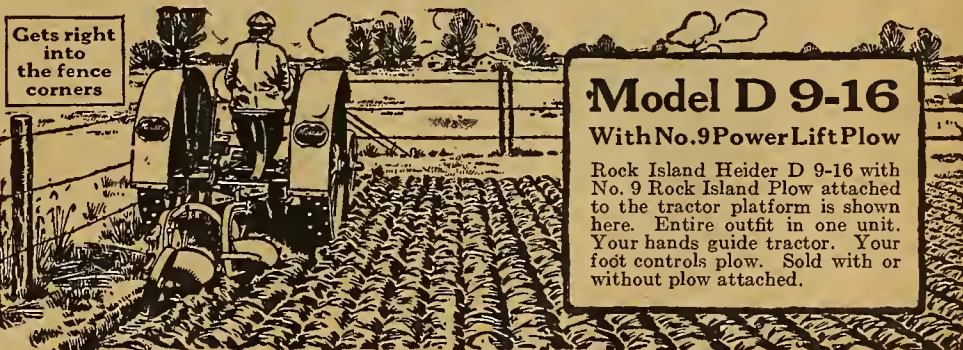
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Get This Blow-Out Patch

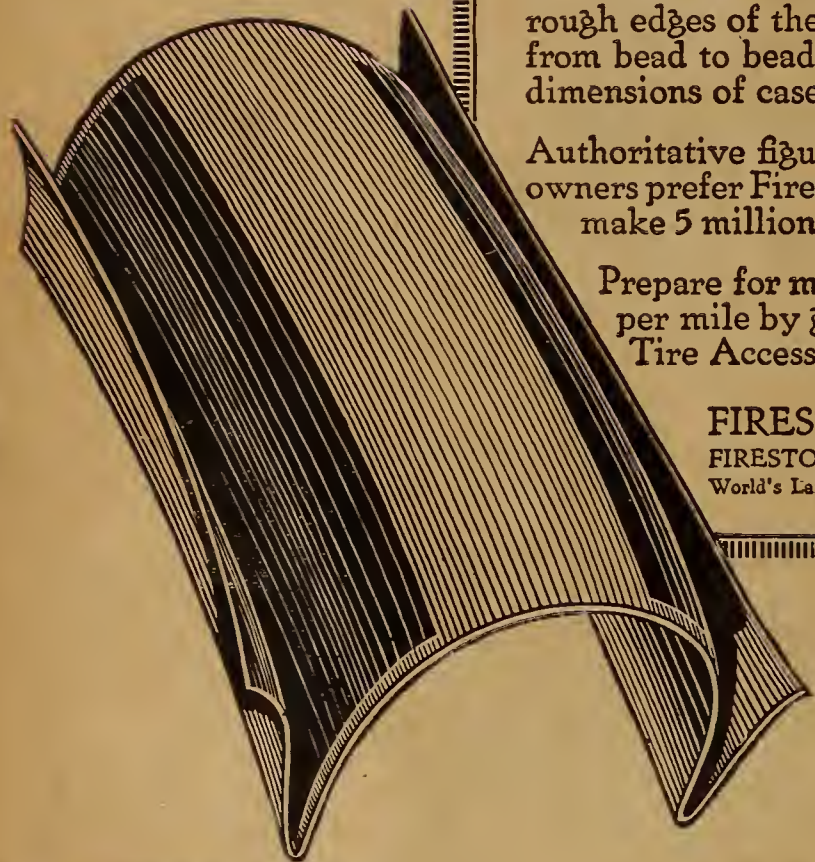
THE Firestone blow-out patch performs both duties, holds the blow-out securely and protects the inner tube while in casing.

Built of six plies of rubberized fabric, it is flexible and yielding. It is protected at both ends by a molded-in real rubber tip, originated by Firestone, which does not allow the tube to come in contact with the raw, rough edges of the fabric. It is wide enough to extend from bead to bead. It is curved to fit snugly the inside dimensions of case and cannot buckle, see illustration.

Authoritative figures show that one in every four car owners prefer Firestone blow-out patches. Firestone will make 5 million of the 20 million to be sold this year.

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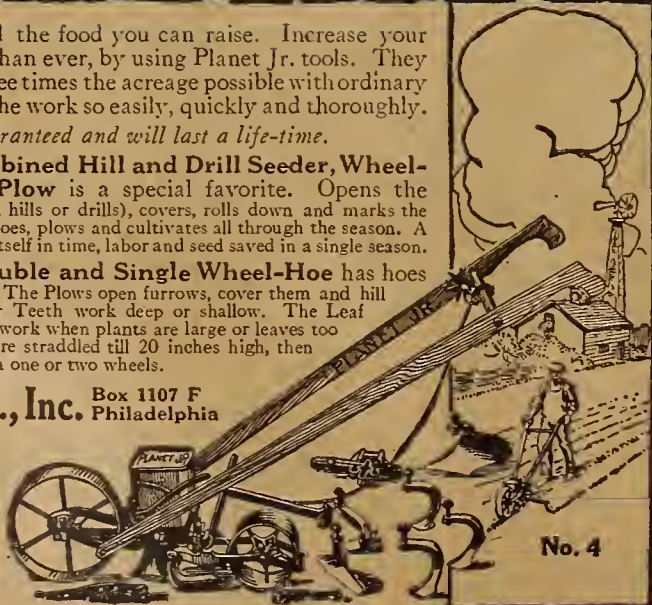
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"I had been getting 2 or 3 eggs a day from 15 hens. Then I commenced putting Don Sung in the feed, and am getting 11 to 13 eggs a day, with one hen setting. Don Sung is the best thing I ever found for making hens lay."—E. L. Moore, 818 Clayborn St., Danville, Va.

Mr. Moore started getting these extra eggs in February, and wrote this letter last March. You can figure his profit with eggs selling at around 70 cents a dozen. And this is no better than Don Sung is doing for thousands of others. No matter how many or how few eggs you are getting, Don Sung will pay you. Accept our offer just as Mr. Moore did:—

Give your hens Don Sung and watch results for one month. If you don't find that Don Sung pays for itself and pays you a good profit besides, simply tell us and your money will be refunded.

Don Sung (Chinese for egg-laying) works directly on the egg-laying organs, and is also a splendid tonic. It is easily given in the feed, improves the hen's health, makes her stronger and more active in any weather, and starts her laying.

Try Don Sung for 30 days and if it doesn't get you the eggs, no matter how cold or wet the weather, your money will be refunded by return mail.

Send 50 cents today for a package by mail prepaid. Burrell-Dugger Co., 155 Columbia Bldg., Indianapolis, Ind.

When Your Starter Stops

By B. H. Wike

STARTER motors and generators, when the commutators and brushes are scratched, pitted, or blackened with dirt and grease, can be taken apart to be cleaned. In dismantling, it pays to be careful, for for some careless move may mean great damage and a high repair bill. But anyone who is handy with tools can do this work himself, provided he is sure the cleaning of the commutator and brushes and the reseating of the latter are the only things to be done to make the system operative once more.

If the brushes are to be reseat and the commutator trued down until smooth and clean, it may be necessary to remove the entire unit from the car and dismantle it. Much depends upon the space open at the top through which to work. First of all, the battery must be disconnected from the unit. Then the brushes must be taken out and cleaned. Next comes the commutator, that bright copper cylinder divided into sections on which the brushes ride. If it be dirty and oily, it is likely that it is also pitted and scratched from the action of the current in burning on the oils.

When free of all oil and other dirt after cleaning with a rag saturated with either kerosene or gasoline, it will be evident whether the surface is scratched or pitted. These scratches and pits must be removed. If they are deep on the armature commutators, the armature had best be removed and placed in a lathe to be trued down just enough to remove the faults. If very badly damaged, this properly comes under a skilled workman's job, and it should be taken to one for attention.

A great many cases will require only a small amount to be taken off, and in that case the handy car owner can do it himself. If the use of a lathe is not needed, get the finest sandpaper made. Cut a ribbon of the paper the width of the commutator and draw the sanded side over and around the surface with a back and forth movement, making sure all the surface is treated alike. When done and the commutator is free of the scratches and pits, reseat the brushes by replacing them in their holders and pull in between them and the commutator a ribbon of the sandpaper with the sanded side next to the brushes.

The same back-and-forth movement will again be necessary, only much care must be taken to keep the ribbon of sandpaper true to the curve of the commutator surface so that the brushes will have a curvature at their seating surfaces to conform to that of the commutator.

When done and you begin to reassemble the parts, make sure that chunks or drops of old grease do not attach themselves to the newly polished commutators and brushes, else the same trouble will return, though perhaps with less intensity. Also make sure that every piece goes back to its proper place in the assembling.

How is Your Carburetor?

By C. L. Gouveia

MANY drivers find that while their car is new, or has been recently overhauled, they can drive quite slowly on high gear. After they have driven the car 1,000 or 1,200 miles it will jump and jerk if throttled below 10 or 15 miles an hour, which necessitates throwing out the clutch or changing to a lower gear. The trouble lies in the carburetor, and its proper adjustment will bring back the ability to run the car slowly on high. Perhaps you can make the adjustment yourself. If so, all right; but if you are not sure, better take it to a man that knows how.

New Soles for Tires

FEW motorists realize that retreading will add many miles to the life of a tire. This applies, of course, only to tires that have received good care. If the tire has been run underinflated the side wall will be weakened and perhaps rim-cut, while overloading has much the same result.

If the old tread has deep cuts, caused by glass or sharp stones, the fabric or carcass of the tire is probably injured. The vulcanizer or repair man can tell if a tire is too badly injured to pay to retread.

Retreading has proved to be a good investment, and often means several thousand miles more life to the tire. Racing drivers, who in the past would never think of using any but a new tire, have in many cases been using retreaded tires, and find them entirely satisfactory.

Oil for Delicate Parts

By E. R. Adams

MANY a magneto, generator, motor, or distributor has been ruined by lack of proper lubrication.

Looking back over several years' experience with various makes of these delicate machines, I have arrived at the conclusion that it pays to give them the best of care. I have discovered that ordinary motor oil—and that is the kind generally used by most owners—is entirely too heavy for delicate bearings.

The grade of oil used for lubricating cream separators gives perfect satisfaction at all times; it will not gum, yet is heavy enough to oil the bearings properly.

Too much oil is as harmful as not enough. Three or four drops in each bearing every two or three weeks gives the best results.

See that all oil caps seat properly, for an ill-fitting cap will admit grit which will cause trouble and expensive repairs.

A little attention mixed with good oil leaves no regrets.

A Storage-Battery Hint

MANY an automobile user grumbles because his storage battery, for which he has paid so much, gives less satisfactory use and a shorter term of service than he thinks he is entitled to.

Few people realize the importance of pure, distilled water, properly handled and stored, as a factor in the long life of a storage battery. Those that do realize it are often inclined to be neglectful.

Aside from undercharging, due to various reasons, one of the most frequent causes of battery deterioration is the use of impure water. Even if you buy distilled water at a service station or in the drug store, satisfy yourself that it has not been kept in dirty receptacles or in iron or galvanized iron vessels. Metal impurities will be taken up by the water and soon destroy the battery.

Some people use well water which is pumped through a metal pipe, or rain water which has run off a tin roof or through galvanized-iron conductor pipes, or the city water which comes through iron mains—and then they wonder why their battery goes to the bad.

The reason is self-evident. There are those who use melted ice water, as the ice is said to have been made from distilled water. Even where this is true, the ice or water may come in contact with metal, and it is certain that it gathers impurities and dirt in handling, and from the wagons, and perhaps from contact with the galvanized-iron-lined refrigerator.

Bottled spring water again is used by others, because it is so delicious for drinking purposes, but spring water practically always contains mineral matter, and here again we have the cause of attack upon the battery.

Be sure that the water used in your storage battery is pure, distilled water which has been stored in clean glass, earthen, or porcelain receptacles. Never permit anyone to use a tin or metal cup of any kind with which to pour it into the battery cells. Either use a glass or hard-rubber syringe, a long-necked bottle, or a porcelain cup. Attention to this small detail will save much annoyance and money.

Errands by Motor

JUST now when every effort is being made patriotically to increase production and the efficiency of human labor, any means of quickening transportation is welcome. One of our readers asks a question of general interest. He asks, "How does a motorcycle compare in general usefulness with the light automobile?"

A motorcycle being light in weight, is economical in tires, gasoline, and lubricating oil, and requires very little room for storage. This results in an inexpensive means of rapid transportation with which a motor car cannot compete.

On the other hand the automobile has greater carrying capacity and is more of a family proposition. Either one or both of these motor vehicles are fast becoming a requisite on farms located some distance from town. Without some quick means of getting to the city and back on urgent errands, many valuable hours are wasted on the road, and horses used for these trips are generally unfit for farm operations until the next day.



The present low purchase price of the Oakland Sensible Six is not a true index of the car's real value. This value is made possible not alone by skillful manufacture, but by a volume of production unusually great. Every saving thus effected, every economy in this direction, has been turned to the betterment of the car and the investment it represents. The result is an automobile which in excellence of design, material and construction, would be impossible at the price under any other circumstances.

In this handsome and substantial touring car the famous 44-horsepower, overhead-valve Oakland Sensible Six engine delivers one full horsepower to every 48 pounds of car weight. Oakland owners regularly report gasoline returns of from 18 to 25 miles per gallon and records of from 8,000 to 12,000 miles on tires.

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Farmers Say Lalley Saves 13 to 66 Hours Per Week

Farmers are not waiting to be sold the Lalley-Light System. They are going to the dealer and buying it—everywhere.

Doubt of its positive saving has disappeared. Proof is piling up on all sides.

In little more than a year twelve thousand farmers have shown their preference for Lalley—twelve thousand farmers know what they are saving in money, time and labor.

As fast as we can, we are taking a census of those twelve thousand owners.

The reports we are getting are wonderful.

From now on, we are going to devote this advertising to these stories of farmers' experience.

Owners Bear Out All We Have Said

We no longer need to ask you to accept our statements.

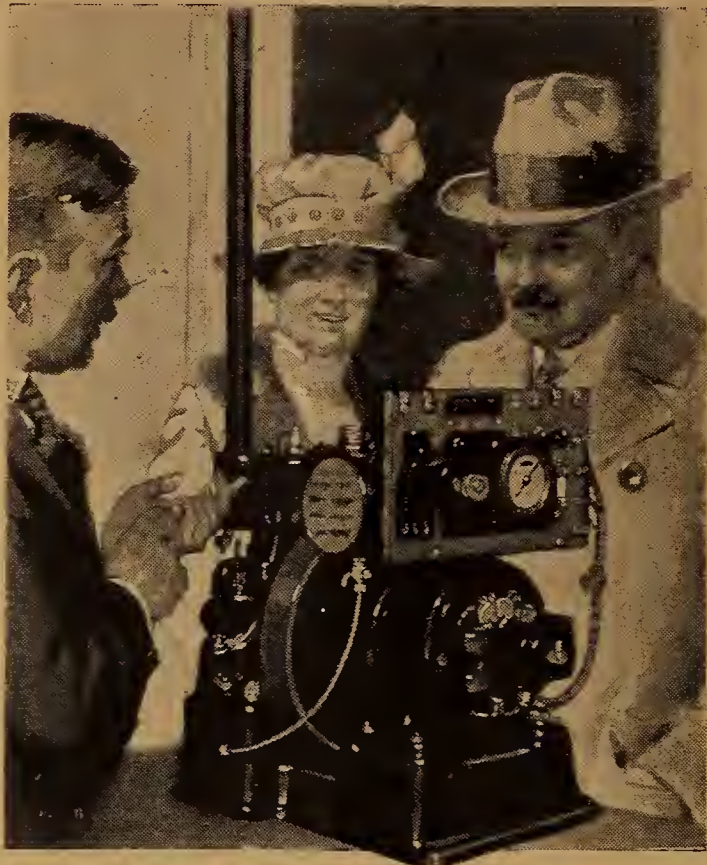
We never doubted for a minute that Lalley-Light-and-Power was one of the greatest blessings that has ever come to the farmers of the world.

Now we can quote the farmers themselves—twelve thousand of them, in little more than twelve months.

As we write, a pile of these farmers' reports is before us. Here is a little sample of the sort of good news they are sending:

The smallest saving reported by any farmer is set down at two hours and a quarter per week.

The grand average saving in all the records compiled thus far is *better than 13 hours per week.*



How Lalley-Light Saves Labor

Lalley-Light furnishes electricity in endless supply to light the
HOUSE BARN OUT-BUILDINGS

Its tireless electric power takes the place of man-power and runs
**CHURNS SEPARATORS FANNING MILLS GRINDSTONES
WATER PUMPS ELECTRIC IRONS WASHING MACHINES**

More Than Comfort—a Real Economy

Many of these farmers admit they installed the Lalley because their wives, sons and daughters gave them no rest till they did.

They weren't thinking so much of the saving. They simply couldn't get away from the conclusion that their wives and families were entitled to the comfort, the education, the conveniences of Lalley-Light-and-Power.

Now they are finding that Lalley is even more than a wonderful comfort and convenience. It is making money by saving time for them.

Think of one man admitting cheerfully that he has gained 66½ hours' labor in one week. We have that report on file.

S. A. Gibson, Roanoke, Texas, considers Lalley-Light a good investment because it saves time, and a farmer should put in all the time he can at productive work.

Nippon Rice Company, Wilsons, Cal., says it finds Lalley-Light-and-Power a great help in taking in a big rice crop.

George W. Willard, Dundee, N. Y., says: "I use but little more gasoline with Lalley-Light than I did for a gasoline engine used only to pump water."

Go to the Dealer and See Lalley-Light

We could go on until we tired you.

These sample letters are but a few from among those we have received.

The big point is that Lalley-Light actually does save time. Which means that it saves labor and money also.

The wise thing for you to do is to see Lalley-Light.

Its value to you, your family and your farm is so great that it would pay you to make a special trip to the nearest Lalley-Light merchant.

His name will be sent you promptly if you write us.

Lalley Electro-Lighting Corporation
761 Bellevue Ave., Detroit, Mich.

Our Co-operative Plan

By R. E. Rogers

IN OUR little community we are learning something every year about the advantages that may be realized through buying and selling co-operatively.

We now buy fertilizers, coal (during the summer), seed, binder twine, flour, and feed which we do not raise on our farms, some staple groceries, hardware, etc.

Sometimes these goods are ordered through the Grange, and again a few neighboring farmers buy a carload or two of supplies together. As we continue to buy co-operatively, we find we are able to do so to better advantage, and succeed in finding more dealers who are willing to sell direct to the farmer.

Our savings are not always enough to make a very impressive showing when we buy co-operatively, still many farmers doing considerable farming business can average a saving of \$50 to \$100 a year, and sometimes more.

Another co-operative venture that has brought good returns was the buying of a draft stallion as a stock-company proposition. Much of the advantage of this get-together movement came through the greater uniformity and higher grade of colts raised in the community. This improvement of our colts attracted competitive buyers and raised the standard of the horses kept throughout the community.

Our last co-operative step was a plan whereby we circulate our music records through an equitable exchange. Also a circulating library and magazine exchange is brought about through our magazine clubs.

Altogether we are finding much satisfaction in developing co-operative enterprises, and not the least of the advantages realized is getting to know many delightful people better than we otherwise would.

Don't Let Your Land Run Away

By E. V. Laughlin

THERE'S an old saying that it's an ill wind that blows nobody any good. It might with equal propriety be said that it's a most unusual flood that doesn't carry somebody something of value. It is certainly true that hillside drainage waters may frequently be turned to good account, and be made indirectly a source of benefit. The writer is thinking of a farmer acquaintance whose land catches a large part of the wash from an adjoining farm of higher altitude. The previous owner of the lower farm was very indignant at the seeming unfairness of nature, and sought in every way to rid himself of his neighbor's drainage waters. His successor, however, thought otherwise. The floods from the uplands were encouraged to enter and spread out over his fields. The result was that twenty acres or more of his farm increased remarkably in fertility—increased to the extent that the yields were almost doubled. What the former owner had regarded as a nuisance this more progressive one looks upon as a blessing.

Of course, the floods were not given unrestricted liberty. They were permitted to enter through a fan-like gap at the mouth of which there was a considerable area of grass. The scattering of the waters greatly decreased their tendency to erode, and the grass tended to entangle the coarser particles and restrain them from damaging the interior of the field. In this way the surface layer of the area above mentioned was deepened several inches with fine rich silt.

A critical examination of hillside wash reveals the fact that only the finer and lighter parts of the soil are carried any very great distance, the heavier parts accumulating along the immediate path of the drainage ditch. The lighter humus, naturally, is floated away quickly—an explanation of why the first flood waters are dark colored. Of about equal ease of removal are the soluble portions—the parts containing the most available plant food. Those parts that render the water muddy are insoluble constituents of varying degrees of fineness. The overturning, grinding, aeration, and mixing of these frequently form a soil excessively productive.

It is not always possible, of course, to trap the wash from the near-by uplands; but whenever it can be done the labor involved will bring large returns. Every farmer so situated should give this matter careful attention.

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THE ELECTRIC LIGHT AND POWER FOR EVERY FARM

LAND!

RICH LAND in Michigan. Grains, poultry, fruit, stock. Big yields. Less labor. 10, 20, 40, 80 A. \$15 to \$30. Easy payments. No commissions. Big booklet free. SWIGART LAND CO., Y1250 First Nat'l Bk. Bldg., Chicago, Ill.

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Drive a new 1919 Birch SUPER-FOUR and make good money selling Birch cars to your friends and neighbors. They are fully guaranteed. Prompt shipments. Write quick for full information. **BIRCH MOTOR CARS** Dept. 270, 81 E. Madison St. CHICAGO ILLINOIS

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A Free Trial Package is Mailed to Everyone Who Writes

A. L. Rice, a prominent manufacturer of Adams, N. Y., has discovered a process of making a new kind of paint without the use of oil. He calls it Powderpaint. It comes in the form of a dry powder and all that is required is cold water to make a paint weather proof, fire proof, sanitary and durable for outside or inside painting. It is the cement principle applied to paint. It adheres to any surface, wood, stone or brick, spreads and looks like oil paint and costs about one-fourth as much.

Write to Mr. A. L. Rice, Manufacturer, 76 North Street, Adams, N. Y., and he will send you a free trial package, also color card and full information showing you how you can save a good many dollars. Write today.

60 lbs.
PER
H.P.

That's Enough For Any Engine to Weigh

Any engine that weighs more than 60 pounds per horsepower is too heavy for farm work. It wastes gasoline, material, time and energy.

Cushman Engines weigh only one-fourth as much as ordinary farm engines, but they are balanced so carefully and governed so accurately that they run even more steadily and quietly. No loud explosions—no fast-and-slow speeds—but smooth, steady running like automobile engines.

CUSHMAN Light Weight Farm Motors

Easy to Move from Job to Job

4 H. P. weighs only 190 lbs., being only 48 lbs. per horsepower. Besides doing all ordinary jobs, it may be attached to any grain binder, saving a team, and in a wet harvest saving the crop. Also it may be used on corn binders and potato diggers.

8 H. P. weighs only 320 lbs., being only 40 lbs. per horsepower. For all medium jobs. Also may be attached to hay presses, corn pickers, saw rigs, etc.

15 H. P. weighs only 780 lbs., being only 52 lbs. per horsepower. For heavier farm jobs, such as 6-hole corn shellers, ensilage cutters, large feed grinders, small threshers, etc.

20 H. P. weighs only 1200 lbs., being only 60 lbs. per horsepower. For heavy duty jobs, such as shredders, shellers, grain separators, heavy sawing, etc.

Cushman Engines do not wear unevenly and lose compression. Every running part protected from dust and properly lubricated. Equipped with Throttling Governor, Carburetor, Friction Clutch Pulley and Water Circulating Pump. Ask for Book on Light-Weight Engines.

Cushman Motor Works 807 N. 21st Street Lincoln, Nebraska

Two Men Can Carry Cushman 8 H. P.



Grab This Thief

By A. M. Paterson

BECAUSE billions of weed seeds are in the fields as a result of the 1918 crop of vegetation, a nation-wide weed-swatting campaign would greatly increase the production of all crops. The weeds that have already made a start should be exterminated the first chance you get. Early and frequent cultivation will kill them by the millions.

If the overgrazed pastures are given a rest, the native grasses will come back and crowd out the iron weed, wild verbena, horse bur, snow on the mountain, wild croton, poverty grass, drop-seed grass, and other pasture weeds. Salt the bindweed, whenever it appears in a new locality, with an application of common crude salt, applied at the rate of 12 tons to the acre. Have alfalfa seed tested at the seed laboratory at your state experiment station, to find what weed seeds are in it.

As there are no seed laws in many States to protect us, we will have to protect ourselves. If Sudan grass is planted, be certain that the sources are free from Johnson-grass seed. The seeds of the two species can scarcely be distinguished from each other.

Weeds waste tons of water that should go into the growing crops. It takes more water to produce a ton of pigweeds or Russian thistles than a ton of sorghum. An acre of sunflowers will use 13,000 barrels of water a year, or enough to irrigate an acre of alfalfa a whole summer. It pays better to raise crops than to raise weeds, and it is just as easy if you start in time.

It is to be hoped that the county agents will give special attention this year to the weed problem in their respective localities and report unknown or troublesome weeds to their state botanist for identification and for information as to the means of eradication.

When you send weeds to your state experiment station for examination and identification, enough of the plant should be sent to show the characteristic leaves and the flowers or seeds. The latter are indispensable in many, if not most, cases for correct identification. Seedlings should not be sent. Specimens should be sent in as fresh condition as possible, wrapped in damp paper, tied, rewrapped in strong dry wrapping paper or newspaper, tagged with the name of the sender and his address plainly written, and mailed parcel post.

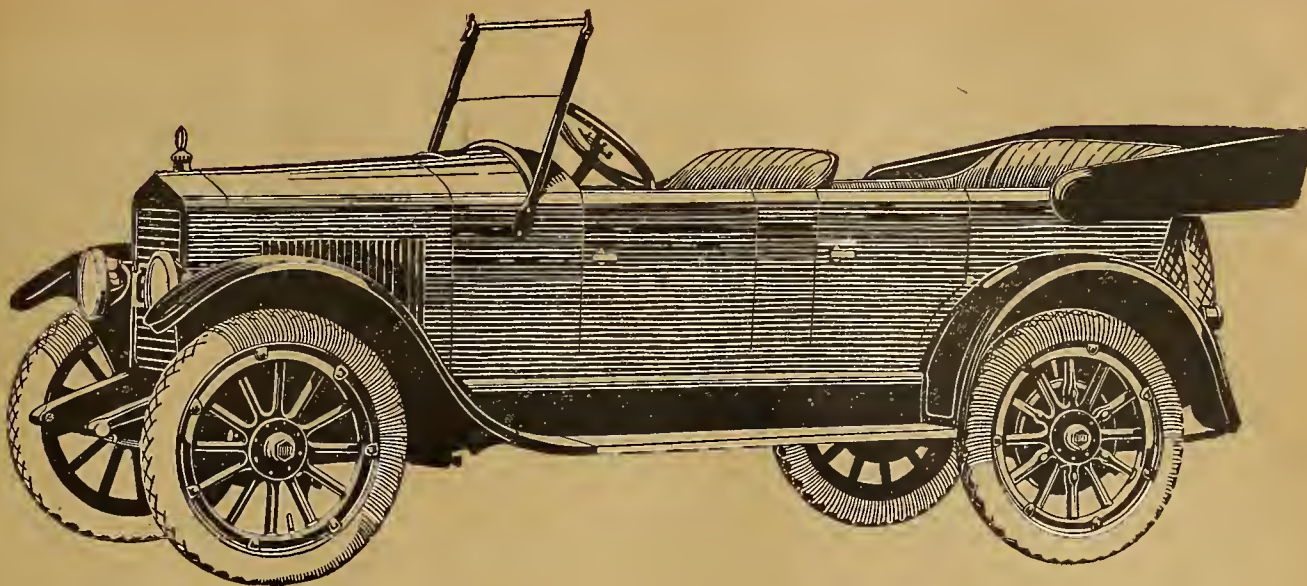
THE native plant of the plains, fog fruit, because of its underground root system, has become a pernicious weed of gardens, vineyards, and orchards. The Western ragweed, an ordinary prairie plant, often becomes a nuisance in cultivated fields because of its propagation by means of horizontal roots.

Among introduced weeds the bindweed is common, but not dangerous in Europe and Eastern States, where it is held in check by the growth of competing vegetation. In the dry Western country, though, it is a rampant pest—the most dangerous and the most nearly ineradicable weed we have, merely because its deep-ranging root system enables it to collect the moisture that should rightly go to the growing crops. Spreading by means of its underground system more extensively than by its seeds, it advances steadily, and never retreats.

A more complete knowledge of the range and spread of introduced weeds is seriously needed. Now, a new weed is usually allowed to spread sufficiently to become troublesome before it is reported to the state botanist.

There are approximately 800 kinds of weeds in the United States. Fully 400 may be called common weeds, and about 200 range from merely troublesome nuisances to dangerous pests. Strange to say, most of the worst weed pests in the United States have come from Europe and Asia. It is sufficient to mention Canadian thistle, Russian thistle, field sow thistle, field bindweed, Johnson grass, quack grass, crab grass, foxtail, cheat, buckhorn, most of the wild mustards, the cockles, catch-flies, champions, mullein, burdock, pigweed, lamb's-quarters, and wild carrot. These and scores of other weeds have come into the United States in seed shipments or in ballast, and have made their way steadily inland.

The botanist finds weeds interesting because they are generally successful types of plants, and it is of scientific value to find out how and why they are so successful. The scientific knowledge thus gained lies at the basis of weed eradication.



The Essex—\$1395

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You are to advertise the Essex.

Instead of our praising it, we wish you to do that. And what you will say is what we want everyone else to think.

Every praise that can be suggested has already been applied to some other car and, as you know, all cars do not come up to the claims made for them.

So the Essex must speak for itself.

It is endorsed and will be sold by the leading automobile dealers in every section of the world.

Dealers of their type do not take on cars about which they have the least doubt. They do not make selling contracts with new and untried organizations.

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such a road and at such a speed you are not pitched or bounced about.

Has Economy of the Light Car, Comfort and Endurance of the Costliest

The Essex's motor would inspire a whole season's advertising campaign. A slogan might be written about its beauty.

Its economy of fuel, lubrication and tires appeals to others.

It awakens the pride of ownership. It has dignity that comes from power and poise. It will retain its smoothness and flexibility and quietness throughout long hard service.

The Essex is light in weight and cost. It is rich in detail and refinement.

Everyone says nice things about the Essex.

We Are Not Asking You to Buy Now. Just Ride in the Essex

Only a few cars are available for each territory. The first ones are being distributed so as to reveal their qualities to the greatest number of people. When you see by the newspaper that your dealer is ready with his Essex, go look at it and tell your impressions to your friends.



(2)

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Ward Work-a-Ford

Gives you a 12 h. p. engine for less than the cost of a 2 h. p. Ford builds the best engine in the world—it will outlast the car—and you might as well save your money and use it to do all your farm work. No wear on tires or transmission. Hooks up in 3 minutes. No permanent attachment to car. Cannot injure car or engine.

Friction Clutch Pulley on end of shaft. Ward Governor, run by fan belt, gives perfect control. Money back if not satisfied. Ask for circular and special price.

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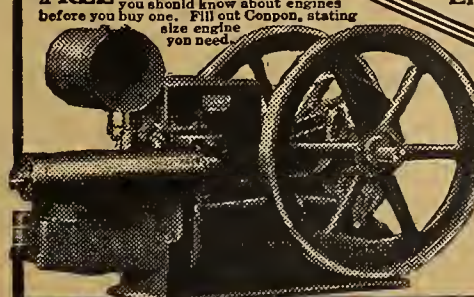
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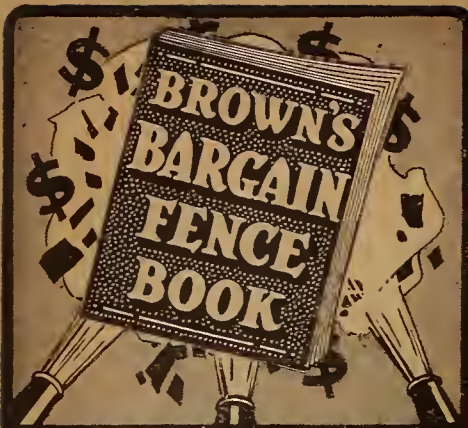
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The Next Five Years—and You

[CONTINUED FROM PAGE 5]



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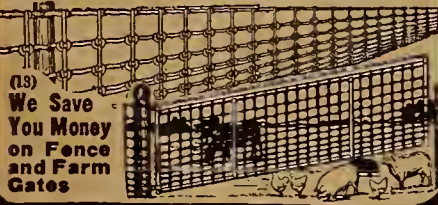
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Dont Send a Penny

These Len-Mort Work and Outdoor Shoes are such wonderful value that we will gladly send them to you at once, no money down. You will find them so well-made and so stylish and such a big money saving bargain that you will surely keep them. No need to pay higher prices when you can buy direct from us. Why pay \$5 and \$6 for shoes not near so good?

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This shoe is built to meet the demand of an outdoor city workers' shoe as well as for the modern farmer. Built on stylish lace Blucher last. Special tanning process makes the leather proof against the acid in milk, manure, soil, gasoline, etc. They outwear three ordinary pairs of shoes. Very flexible, soft and easy on the feet. Made by a special process which leaves all the "life" in the leather and gives it a wonderful wear-resisting quality. Don't let leather soles and heels. Dirt and water-proof tongue. Heavy chrome leather tops. Just slip them on and see if they are not the most comfortable, easiest, most wonderful shoes you ever wore. **\$3.85** for shoes on arrival. If, after Pay only careful examination you don't find them all you expect, send them back and we will return your money. Order by No. X15012.

SEND your name and address, and be sure to state size you want. You be the judge of quality, style and value. Keep them only if satisfactory in every way. Be sure to give size and width.

LEONARD-MORTON & CO., Dept. X2125, Chicago

Peace has changed the food situation materially. Hoover went abroad last summer and took part in the great series of conferences that followed the final turning of the tide and the defeat of the ultimate German effort that began with the breaking of the Fifth British Army in March. Our marines had begun the counter attack at Château-Thierry in June; by the time Hoover went over, German defeat was certain. At Versailles, in Paris, and in London the military and economic leaders of the Allies made their plans.

Every plan assumed German defeat—in the summer of 1919. It may be that Foch hoped for the victory he won last November; it is certain that no one dared count upon it. All the plans called for an effort this spring such as even this war had not yet produced. Hoover and the food chiefs of the western Allies made their calculations accordingly. Every ship that could be had was needed to bring troops and guns and munitions from America. And so the rations of France, Britain, and Italy were cut to the bone for the winter and spring, that all efforts might be centered on the winning of a military decision. The final plan called for the sending of seventeen and a half million tons of food from America to Europe in the food year that ends on June 30, 1919.

Peace has changed everything. Ships need not carry troops and guns to France now. They can bear food—and must. For now, after four years of agonizing effort, four years of privation, the peoples of France and Britain and Italy are relaxing. How could you expect anything else? Can you ask them to go on making the same sacrifices they made during the years of imminent danger? You would ask for something more than human if you did.

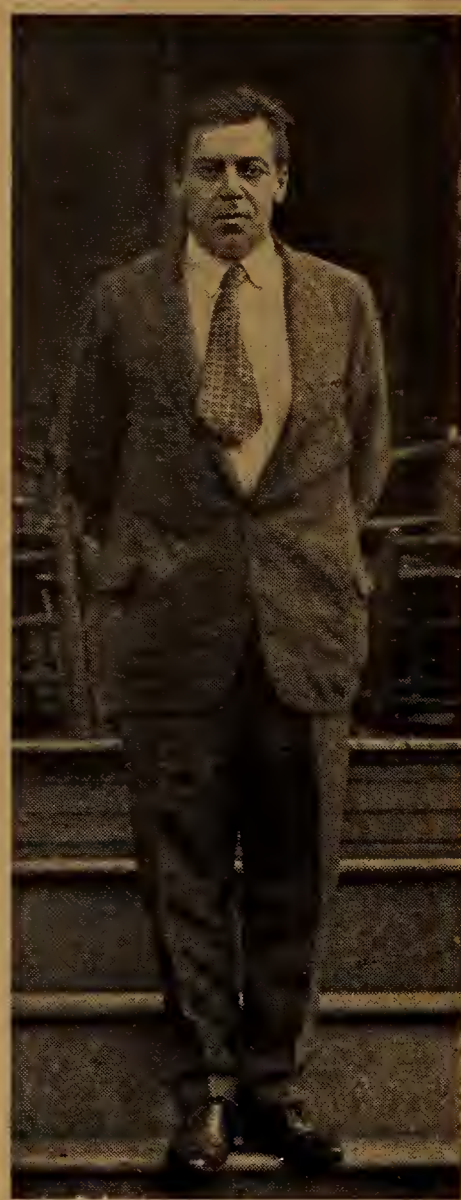
The time has come when they must be well fed. They must be relieved from hunger and distress. Otherwise—? Well, no one looks for Bolshevism in any one of those countries, of course. But social unrest, even disorder, there may well be if food is lacking. And the business of the world now is to repair, as quickly as possible, the ravages, material and spiritual, of the war. Even if we, here in America, choose to be purely selfish, to think only of our own interests, still we ought to help the world to settle down to business as soon as possible.

We want peace. We need a world with which we can do business. Our armies are coming home. Instead of a labor shortage we shall, before long, have more men than we could keep at work before we entered the war. We need great markets abroad to keep our industries working at high speed. And we can't have that sort of world for the asking. We'll have to help it to get on its feet.

And so all the plans that Hoover made last summer have been revised. The present plan is to send something like twenty-five million tons of food, instead of seventeen and a half.

You on the farms have got to produce more food. When all other ways of feeding the world are reckoned, that is still the vital thing. Saving has pretty well reached its limit. Food is still wasted in America, but wonders have been done in eliminating waste. Some food that the war locked up is available now. The shortage of wheat is over, for one thing. Supplies in the Argentine, India, and Australia can be transported to Europe. Argentine meat, too, is back in the world's larder. But when it comes to meat, there are difficulties aside from the actual supply. Beef and mutton have to be transported in refrigerator ships. There is more than enough meat available for export to Europe now, considering the number of refrigerator ships in service.

Java sugar will almost end the world's shortage of sugar. We may have to go easy with sugar for a year or two here, but an allowance of four pounds a month isn't much



Photograph from Paul Thompson

WILLIAM ALMON WOLFE

THIS is the man who wrote the article you are now reading. He doesn't make any claims for himself, but we'll tell you, confidentially, that he is one of the clearest-thinking, most logical, and ablest writing men America has produced, and personally the kind of man you like to know.

What he is proud of, though, is the fact that he reduced from 280 pounds on the day we entered the war, to 197 pounds the day the armistice was signed. Which we'll say is some food conservation. He was born in Brooklyn in 1885, and has been writing almost ever since. We hope to have him write some more for us from time to time.

THE EDITOR.

under our old consumption, and it is certainly plenty.

Generally speaking, there is still a shortage of grains. You needn't give so much thought to wheat. Rye and oats aren't to be used as substitutes for wheat any longer; increased production of both is urgently needed. Corn is the most important of our crops—corn, which means hogs.

For when we come to hogs we are at the heart of the problem. It's fats the world needs most. Lack of fats had a major part in beating Germany. Shortage of fats

comes pretty near to being the reason for famine all over the world in all ages. And right now the world is three billion pounds short of the fats it needs—pork and dairy products and vegetable oils. Hoover thinks that we can export nearly four billion pounds of fats this food year—all but half a billion pounds being pork products.

Hogs are marvelous creatures. You can get a hog ready to be of some use to the world in a year, can't you? You know how long it takes for a steer to be ready for the slaughter house. And a hog lends himself readily to transportation. Ham and bacon and lard don't require elaborate refrigerating machinery. Any old ship can carry them.

Can you visualize Europe's condition in this matter of animals? Fats, of course, come largely from animals. Milk, cheese, butter, lard, the fat in ham and bacon and other meats—you supply those to the market almost incidentally. You feed your dairy animals pretty easily. But lately you've been feeling the pinch. If you have been producing milk you've probably had trouble in getting a price adequate to pay you. Over there, during four years of war, dairy herds have been nearly wiped out. Animal feeds haven't been grown much in Europe; nearly all have been imported. And during the war it wasn't possible to import feed. So dairy stock has been slaughtered to an appalling extent. Jersey and Holstein cows with milk records have gone to the butcher.

From America, in the next few years, those herds are going to be replenished. You'll find it easy to dispose of calves of good stock for some years to come. Argentine cattle, range fed, wild and coarse, won't do. The great reservoir for good dairy stock will be here. You've got to raise more cattle of good quality, and of course that means increased planting of feed crops. High protein grains will pay you well. There will be an improvement in the feed situation, however. Cottonseed meal is being used less now for fertilizer, and with the resumption of wheat-milling on the old scale, which we can look for, there will be more wheat mill feeds than in the last year and a half.

You farmers have the greatest opportunity in the world's history. Prices will stay up, beyond question. The guaranteed price of wheat will be maintained, even though it means a loss to the government, which isn't really probable. And the world's demand for food will take care of other prices. There never has been such a situation. You have a chance to serve the world not only with honor but with profit.

In Europe chances are being overlooked by the men who till the soil. Small wonder, though. Four years of war, and anarchy on the heels of war, have shattered confidence. In the Ukraine, which has a population of about 28,000,000, something like 550,000,000 bushels of wheat was last year's crop—which was not as great a crop as that incredibly fertile black earth should have yielded. Yet it was big enough—big enough to make it one of the world's tragedies that in the cities near-by people were starving.

What happened was that the peasants hoarded food. Germany, after the peace of Brest-Litovsk, thought to find much food in the Ukraine. It was there, but

Germany didn't get it. The peasants buried their grain, and planted new crops over it. They hid their cattle in caves and cellars by day, and drove them out to graze at night. Money meant nothing to them—it was paper money, without any real value. They couldn't buy the things they needed with that money; they weren't to be bought at any price. Conditions there and in all Russia show what money really is—a medium of exchange. Money would mean nothing to you—would it?—if you couldn't buy Fords and pianos and shoes and clothes and subscribe to magazines and newspapers with it. And



Photograph from Paul Thompson

that is the condition of affairs over there. Confidence in the restoration of such a world as we had before 1914 is necessary before the peasants in Europe will get back into the game of food production for the cities and towns. Restoring that confidence depends on restoring order; and restoring order depends on full stomachs. Unless you help Hoover to step in, there is a vicious circle in which cause and effect chase one another hopelessly around and around.

The story of what Hoover and America did in saving Belgium is being spread over Europe now. It is a story that is lighting the torch of hope in many of the dark places of the earth.

But the task that Hoover faces now is as much greater than the one he faced in Belgium as the task of beating Germany was greater than that of beating Spain in 1898.

How about Germany and Austria? You probably feel that there is something fundamentally wrong about making sacrifices to feed the people who brought all the horrors of the last four years upon the world—that if they are hungry it serves them right.

Well, that's true enough. Sentimentality about Germany would be grotesquely out of place in the light of the Lusitania, of Louvain, of a hundred other outrages. Sheer humanity isn't sentimentality, however. You wouldn't sentence a criminal to death by starvation. And, in any case, the state of Germany and Austria isn't so desperate.

Recent food surveys in the central empires revealed that there was food enough, even with a 50 per cent increase in war rations, for eight months—which would bring in a good share of the next harvest.

German ships, lying in German harbors—about two and a half million tons are available—can be used to bring back some available vegetable oils from Africa and the Orient to relieve the fat shortage, if the blockade is modified. We will have to let Germany have some food, probably. But Bohemia and Hungary have a surplus, which will be released if we give them assurance that, in case of need, we will give them help later.

And we don't want Bolshevism in Germany. We want Germany to get to work to repair the damage she has done. We want her, chastened and humiliated, to turn from red revolution to the work of earning and saving the money that will, in some small measure, atone for the ruin she wrought in Belgium and France. She won't do that, you know, if she imitates Bolshevik Russia.

IT'S very easy, you may be thinking, to talk of increased food production. You've probably heard a lot of that talk from people who haven't taken into account at all the fact that producing food, like any other enterprise, requires the investment of money and time.

You will no doubt remember times when you couldn't sell, except at a loss, what you had produced. You feel the need of some assurance that you will be protected.

Hoover has thought a good deal about that. The Lever Law, from which Hoover and the Food Administration derive their authority, expires with the proclamation of peace.

What will happen then? Will there be an end of regulation, of price control, of adjustment of the interests of farmer and consumer? Not if Hoover has his way.

Here is what he says:

"Some organization must be continued or set up to guide our distribution of food abroad, if it shall reach the most deserving and the most necessitous. The vast purchases for export are now all in the hands of Governments, many of them acting in common, and their powers in buying could, if misused, ruin our producers or, alternatively, do infinite harm to our consumers.

"An utter chaos of speculation and profiteering would reign if these buyers are not co-ordinated and controlled."

No. You needn't worry. You farmers have at least five years of golden opportunity before you. You must remain mobilized so long at least, while the rest of the world struggles to get back to a self-sustaining basis. The battle line has shifted. The trenches of France and Belgium hold the hope of the world no longer.

The war has come to America—but a war that no longer involves sacrifices, and that cannot be lost. It is a war that builds and does not destroy. The farmer has come into his own.

We Sell No Experiments

Every International machine is designed, built, and sold to do certain work. The farmer who buys one expects it to do that work. We sell no experiments. Our machines are tested for years before we sell them, and we maintain a trained Service Organization to make sure that every machine sold meets the buyer's expectations. By this policy, we have won and hold the confidence of the many farmers who are standardizing on International machines.

Prepare Now for the Spring Rush

Seed-bed preparation is the foundation of harvest profits. With the power from an 8-16, 10-20, or 15-30-h. p. International kerosene tractor, hitched to the good machines in the International line of tillage implements, you can prepare the best seedbeds for your different crops, at the correct time, and with the least expense for power and help. Choose the machines you need for Spring work from the list below. Manure spreaders in three handy sizes; cream separators, hand or belted, in four sizes; grain drills of every kind and size; engines, wagons and motor trucks—you will find in each the standards of quality and service that have made International machines famous. See the local dealer or write us for catalogues.



International Harvester Service means two things of prime value to busy farmers. It is worth a great deal to you to be able to secure a dependable machine promptly when you need it. It is sometimes worth as much to get expert assistance promptly in case of accident. Our Service Organization covers both features. At each of our 89 branch houses there is a full stock of both machines and repair parts for those machines, on which your dealer can draw in case of emergency. There is an International dealer, wide awake and attentive to the needs of his customers, within telephone call. Whatever you need in the way of high-grade machines or service of any kind is within easy reach and is yours for the asking.

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Gasoline Engines
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Motor Trucks
Motor Cultivators

Corn Machines

Planters Drills
Cultivators
Motor Cultivators
Pickers
Ensilage Cutters
Shellers
Huskers and Shredders

Dairy Equipment

Cream Separators
(Hand)
Cream Separators
(Belted)
Kerosene Engines
Gasoline Engines
Motor Trucks

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Straw Spreading Attach.
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Let the Wind Do the Work

By T. S. Hurd

THE farm windmill will play an important part this year in the great food-production campaign. The farm windmill should be no "slacker" this year. It should be ready day and night to absorb the energy of the wind to lift the water for thirsty gardens. Lack of timely rainfall is often the doom of an otherwise carefully handled and tended vegetable garden.

This year the farm garden will be an important factor in reducing the cost of living. Accordingly, every precaution should be taken to prevent a failure of garden crops. In those areas where natural rainfall is not dependable, some simple method of irrigation should be provided.

The farm windmill will serve faithfully and well in lifting water for irrigation if given an opportunity. This faithful source of power will not save the garden unless the owner coöperates in conserving the water pumped. The average windmill lifts water intermittently and at a slow rate. Consequently, if the water pumped is allowed to flow directly onto the warm, dry soil, a small area only can be satisfactorily covered. A small trickling flow does not spread laterally over the surface, but percolates deeply into the soil and beyond the roots of the shallow-rooted vegetables.

If the water lifted, on the other hand, is stored in tanks, barrels, or reservoirs, a volume sufficiently large can be secured in a surprisingly short time to irrigate effectively a much larger area. A barrel of water containing 31½ gallons will cover a garden bed six feet wide by eight feet long, one inch deep. A quantity of water even as small as this, if properly applied, will greatly help the lettuce bed or the shallow-rooted radishes. It is advisable, therefore, to use even an ordinary barrel for storage if nothing larger is available.

A reservoir sufficiently large to hold all of the water the average windmill can pump in three or four days is much more desirable. The ordinary stock tank made of wood, steel, or concrete would serve well. A tank five feet wide by ten feet long and two feet deep holds enough water to cover an area fifteen feet wide by forty feet long and two inches deep. In a day of average wind the farm windmill will more than fill a tank of this size with water.

Get Rid of Your Farm Junk

By A. M. Paterson

DON'T let your scrap iron and dilapidated machinery rust on the farm. Gather it up and sell it to the junk dealers. The price of iron and steel has risen because of the shortage of metals, and it is not only a profitable business but a patriotic duty for you to turn this iron into silver.

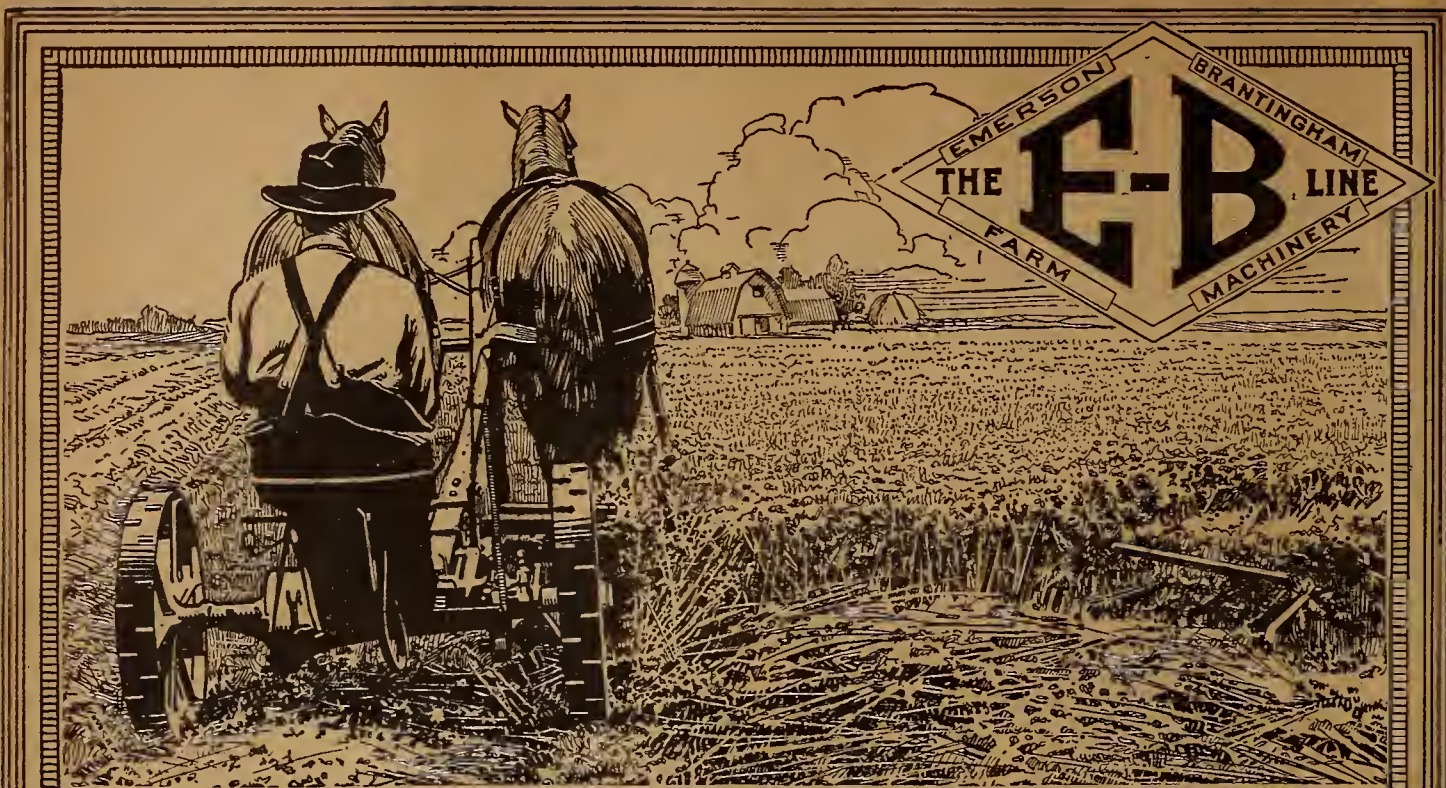
Sometimes a person can sell to the local dealer. It always pays better to sell to a responsible junk dealer, as he has better avenues for the disposal of the scrap and hence can pay better prices.

The metal should be sorted and the iron and steel kept separate as far as possible. Bolts and nuts should be removed and retained, for you need such an assortment on hand. Brass, copper, lead, and zinc are now bringing high prices, and it is well to look carefully to see that none of those metals go in as scrap iron.

By ordering repairs for farm machinery early you will aid in relieving the badly congested centers. Frequently, even in normal times, repairs have been delayed several days because of insufficient post-office and express facilities, and the result is that farmers waste valuable time which could be used to better advantage in the field. This year conditions are worse than before.

At any time, however, it is to the advantage of the farmer to repair his machines early. It saves the farm labor in the spring. There is no tedious delay waiting for the parts nor the time spent repairing when the weather permits working in the fields. Every day of good weather in the spring can be utilized then.

Few break-downs will occur if the implements are repaired now while you can remember, to some extent at least, what repairs are needed. If repairs are ordered late it occasionally means that they must be ordered from the factory and you are very likely to lose days, and perhaps weeks, before the repairs can be obtained.



Saves Crops and Labor By Cutting Twice as Much Grass in Same Time

Labor saving and crop saving are going to be more important than ever before in the history of the world.

The E-B (Standard) Mower is a big aid to conservation of man power and increase of crops.

With its eight foot swath it does more work in less time with no more pull on the horses than many a five foot mower. Also made in 7, 6, 5 and 4½ foot sizes, with correspondingly easy pull.

The E-B compensating lever and spring carries the weight of the cutter bar on the drive wheels. No side draft. No weight on the horses' necks. Less wear and tear and longer life to the machine. Do your mowing with the E-B and you'll have a more successful haying season, less work, a better crop.

See your E-B dealer and have him explain all of the points of E-B Mower construction.

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The Most Complete Line of Farm Machinery Manufactured



E-B Side Delivery Rake
Rakes Three Acres in the Time of Two

Three swaths instead of two, three acres while others rake two, that is the story of the E-B Side Delivery Rake. Labor saving, time saving, when time means the difference between a good crop and a poor one. Light, fluffy windrows that allow the hay to cure gradually and thoroughly. Teeth can be changed from seat for wet hay or dry. Lever changes from rake to tedder instantly. See your E-B dealer for complete facts.



E-B Hay Loader
Gets All the Hay—Without Wadding, Rolling or Twisting

The E-B Hay Loader cleans the windrow as it goes along. It handles the hay gently—does not tear stems and leaves or thresh out seeds. 66-inch sweep of rakes parallel to ground assures clean raking and easy action. Continuous push upward prevents hay being drawn off rack—hay may be allowed to accumulate at rear of rack without clogging. Put an end to the hardest work of haying by putting an E-B Hay Loader on your farm. Get complete facts from your dealer.



E-B Swinging Stacker
Lifts the Hay High—Places It Where You Want It

Building a firm, well-shaped stack is easy with the E-B Swinging Stacker. Simple in construction, with strong wood frame and powerful steel angle plate and cast hinge block. Load of hay received from rake after being carried upward is easily swung into any desired location by operator and dumped. The rapidly increasing number of E-B Stackers used by the most progressive farmers in the country is proof of their being practical for your farm.

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Disk Plow or Moldboard—Which?

By R. B. Rushing

DIFFERENT seasons, different soil conditions, and different kinds of farm help sometimes make big changes in the nature of the implements one has to use. The high price of hired help and my own physical condition, which prevents my doing as much work as in former times, have worked a great change in my farming operations. From my own observations I am led to the conclusion that other men have run up against the same snags that I have.

Disk plows were never very popular in my community until the past two seasons. I myself did not realize their economical value until two years ago, when I was taken with the rheumatism and became unable to follow the plow, nor was I able to secure enough help at a price I could afford to pay. I therefore bought a disk plow, hooked up two good mules, and my daughter took the seat and the reins. She did as fine a job of work as any man, and will soon be breaking sod again for this year's crops.

Last summer we had quite a trying experience with the disk plow. The ground was so hard that the hired man and my son could not plow with the moldboard plow at all. My daughter laughed at them, and took the seat of the disk plow and went right on plowing every day until every foot wanted was turned.

She tried plowing with the riding moldboard plow, but here in southern Illinois we have many grubs in the soil that are extremely hard to get rid of, and they are sure to plug up the moldboard plow. This is not so with the disk. It just goes right on "over the top."

We also have a type of soil here that makes fine sweet potatoes, it being a stiff clay. While the moldboard plow will hardly scour in it, the disk plow does excellent work.

You can go through this section of country and now find two disk plows to one moldboard. The real truth of the matter is that we farmers were driven to use them, and now we are all glad of the change.

I don't think I shall ever try to use any other kind of plow in any field that is large enough for a team and riding plow. Here in the hills we always have more or less dry weather, and the past year, were it not for the disk plow, we could not have prepared our wheat land in time.

In this connection let me say that my daughter is not the only girl that can be seen riding a disk plow in this section. In a recent drive one day I counted sixteen girls and housewives riding disk plows, and only eleven men. Had I not seen the women at work I would have thought that the plowing was being done by experienced farmers.

The old brush patches that have been an eyesore for ages are now giving way to the disk plow, and waving fields of wheat and corn and potatoes are growing every season instead of scraggly bushes and weeds.

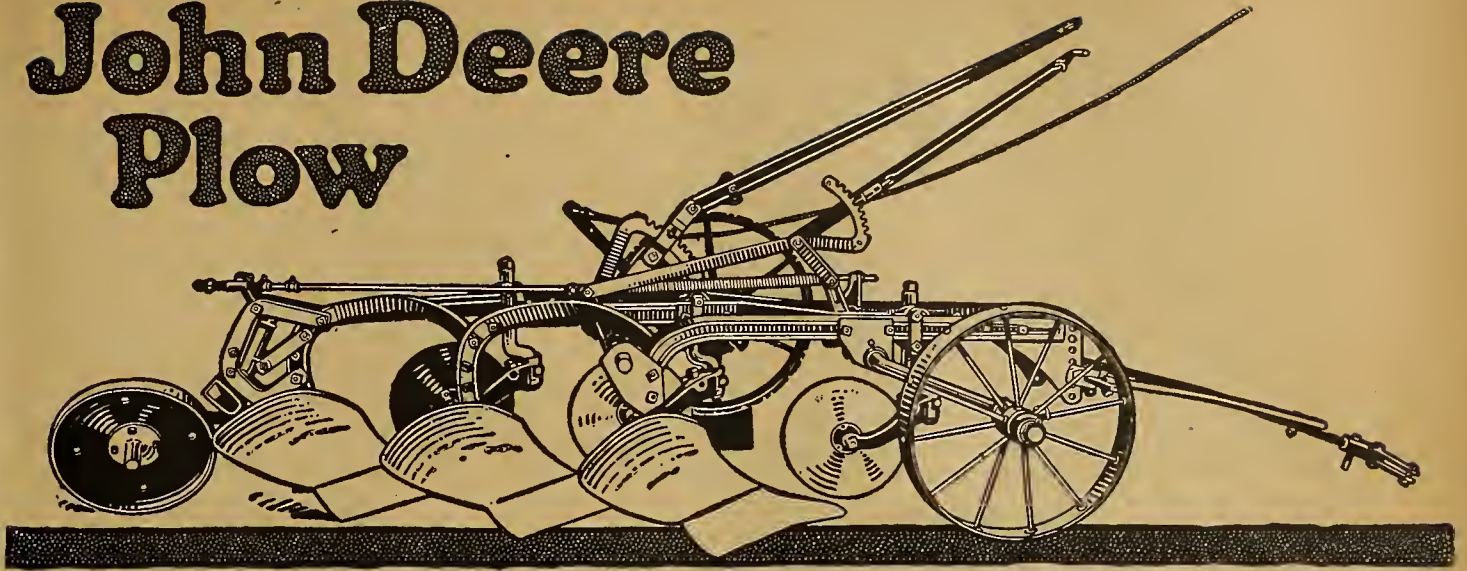
I am not trying to throw cold water on the moldboard plow; it does fine work where land is free from grubs and hitches of various kinds. If the soil is in good plowing condition, anyone can use a moldboard the same as the disk; but the disk plow shines where it is impossible to use the other.

A disk plow can be set to work in practically any soil; it does good work in stiff soils that are so hard that the moldboard plow will do nothing but turn over a few clods. It cuts down through and turns the soil over, putting it in much better shape for further pulverization than the moldboard plow can possibly do.

You can set a disk to go just as deep as you want to—that is, as deep as your power can pull it. I plow deeply, and that is one reason why I like the disk plow. I actually believe that my daughter can tear out twice as many grubs with the disk plow as any man can with the moldboard plow. Perhaps I am a crank about the disk plow, but I can't help it. It gives me much pleasure to see my daughter going round and round the field doing just as much work as my son and the hired man.

In this connection, and at this time it might not be out of place to say that she gets the same share of the proceeds as my son does. I always make it a point to pay enough to make them both want to stay with me and enjoy the work. The hired man has a family, and he also is well enough supported so that he likes to stay from year to year.

It's a John Deere Plow



FOR many years farmers everywhere have associated the name "John Deere Plow" with special plow quality—with better and longer plow service. Getting this quality is especially important when you buy a tractor plow. A tractor plow does work on a big scale—the quality of the work counts in proportion. A tractor plow must stand heavy strains—its ability to keep on doing good work year after year counts strongly in making plow profits. Remember, you get this special quality when you buy a

JOHN DEERE TRACTOR PLOW

Equipped With Genuine John Deere Bottoms—the kind that have an established world-wide reputation for long wear, good scouring and thorough seed-bed making. You can get the shape and type suited to your soil.

Holds To Its Work At Uniform Depth—It is locked into the ground at plowing depth through the action of the power lift. And here's another mighty important feature assuring the John Deere's good work—the land wheel is set back, balancing the weight of the plow over all three wheels, just as on your sulky or gang plow. Makes plow run steady and assures plowing at uniform depth in uneven ground.

Quick Detachable Shares—Strong and close fitting. Loosen one nut to remove the share. Tighten the same nut and the share is on tight. It stays tight.

Extra Strong Construction—Extra heavy beams of special John Deere steel. We guarantee them not to bend or break. Heavy beam braces, long lapped and securely joined to beam with heavy bolts and lock washers.

High and Level Power Lift—Lifting mechanism is simple, strong and positive. Parts move only when plow is being lifted or lowered—practically no wear.

Three Sizes—Two-bottom, three-bottom and four-bottom. One of the sizes suits your tractor. And, remember, the adjustable hitch adapts the plow for use with any standard tractor.

Farmers Everywhere are making sure of continued good plow service behind their tractor by getting John Deere Tractor Plows. You can't afford to get less than that behind your tractor. WRITE TODAY for full information.

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Riding	Walking Wheel
Feed Mills	Tractor
Grain Drills	Stalk Cutters
Grain Elevators	Wagons
Harrows:	Farm Engines
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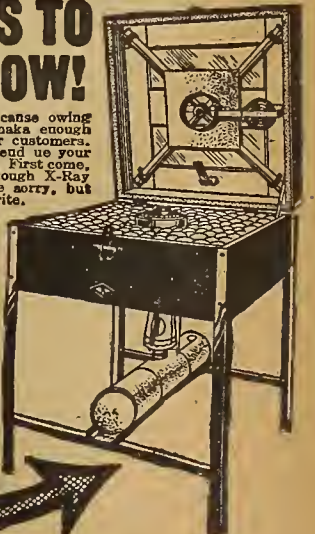
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Don't delay ordering. You may lose out if you do. Why? Because owing to war-time conditions, to the scarcity of material we cannot make enough X-Ray incubators this year to meet the demand of our customers. 9,000 will be all. Not more than half enough. So send us your order at once if you don't want to be disappointed. First come, first served. Remember there won't be enough X-Ray incubators to go around this year. We are sorry, but can only urge you to order early. Write.

Ask for Our Big New 1919 Catalog No. 213

The best ever published. Every machine shown in natural colors. Write for it at once. Tells all about the famous X-Ray incubators and brooders—why they are better—why worth more. Describes our 20 Big Features in detail. Most complete in every way. Send for it. Free.

X-Ray Incubator Company
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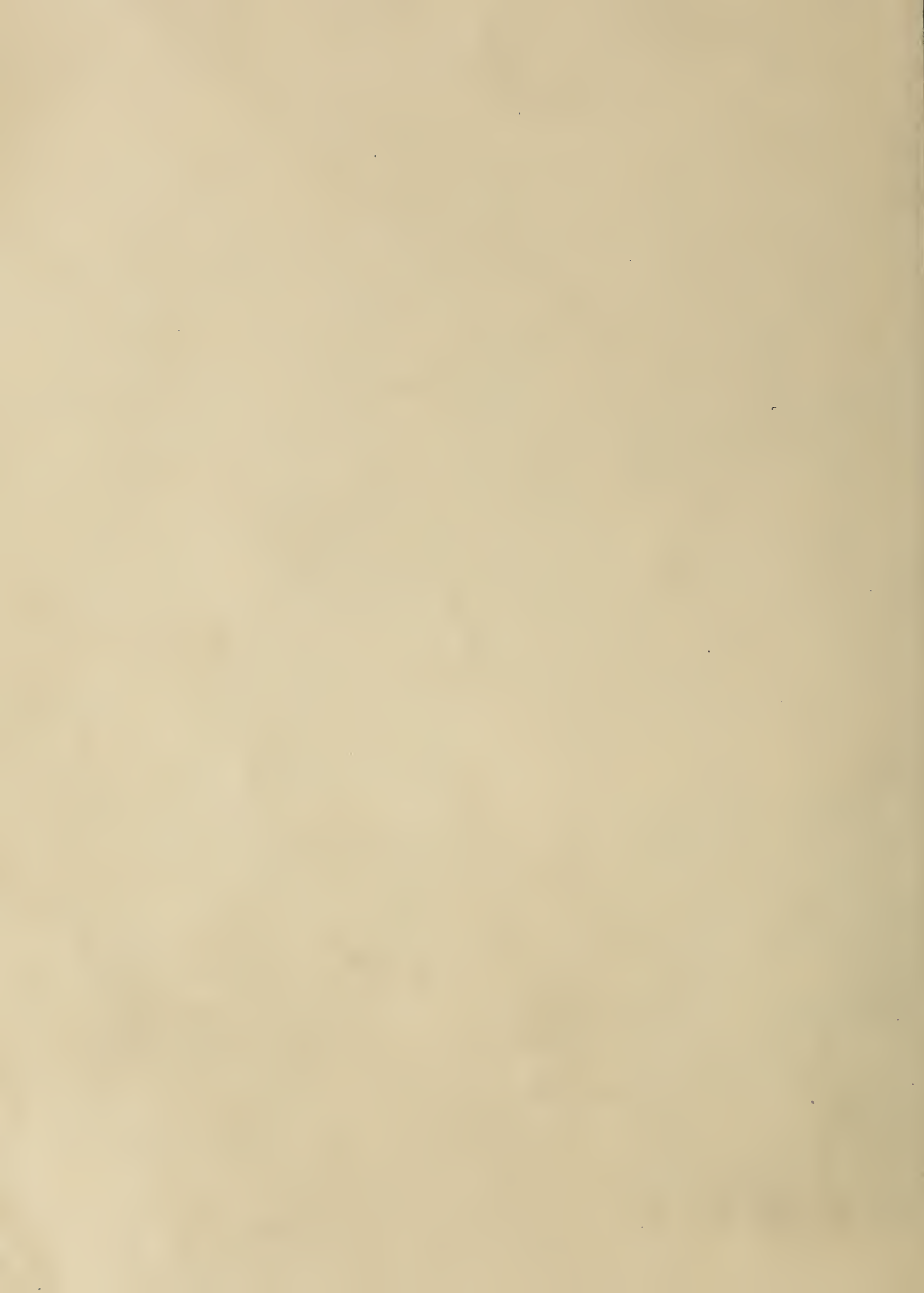
X-RAY INCUBATORS

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X-Ray Brooders Protect Your Little Chicks

The X-Ray Brooder is as far ahead of ordinary brooders as the X-Ray incubator is ahead of other incubators. It saves the chicks—furnishes real shelter and protection in any weather. Heat perfectly regulated automatically—plenty of fresh air—clean, dry exercise room. Fully described and illustrated in color in our Big Catalog. Write.

Be One of the Lucky 9000



They Knew Lincoln

BACK in '54 Thomas Wardall, now 103, worked in his brother's store in Springfield, just across from Abe Lincoln's law chambers. "My acquaintance with Mr. Lincoln is one of the happiest memories of my life," says Mr. Wardall. "Just to hear him say 'Good morning' made you feel better all day. No one could stay around Lincoln and be insincere; and, while he never flattered, he was the most encouraging of men."

Photograph from Agnes Lockhart Hughes



Photograph from Underwood & Underwood, N. Y.

VERY muddy, disreputable-looking gentleman walked up the White House steps and sat down on the porch the evening before Inauguration Day, 1861. Attendants were about to hoist him off and call the scrublady, when he asked them to announce to President Lincoln that he had completed his walking trip from New York. Investigation proved him to be Mr. Edward Payson Weston, the walker. Lincoln invited him in, and he went, to the ruination of one chair and part of a rug.

THIS is Bartow A. Ulrich about the time he got acquainted with Lincoln. He's a lawyer and author of seventy-eight now, but he remembers being hauled out of bed to fill a quadrille in which Lincoln was dancing at his mother's house in Springfield in 1847. He was tumhled willy-nilly in among Mr. Lincoln, Stephen A. Douglas, Lyman Trumbull, and others; and he was so sleepy that he didn't know where he was going, and Lincoln had to apologize several times for humping him on the head with his knee.

Photograph from Agnes Lockhart Hughes



A GAY young Washington helle slipped away from her mother and out of the house one April evening back in '65, and went to the Ford Theatre to see "Our American Cousin." In the middle of the first act the orchestra burst into "Hail to the Chief!" and she stood with the rest of the audience, waving greetings to President and Mrs. Lincoln. In the middle of the third act she heard the fatal shot that killed the President, and sat frozen with terror as Booth, pistol in hand, leaped to the stage shouting his "Thus perish tyrants!"



Photograph by Robert H. Matheson

SIMEON W. KING was an office boy in a Chicago lawyer's office when he met Lincoln in 1853. Unlike the modern office boy, Simeon really worked—worked so hard he reminded Lincoln of his own early struggles. And when he was twenty-one Lincoln as President appointed him United States Commissioner of Deeds. He still holds the office, though its fees have dwindled and left him a poor man in his old age. He sticks because he prefers to be true to his trust and one of the common folks of whom Lincoln said "God must have loved them, because he made so many of them."



Photograph from Helen Armstrong

MRS. LUCINDA BERG knew Lincoln. Indeed she did. After dining at her home in Springfield in 1861 he held her hand in parting and said: "To His care I am commending you as I hope in your prayers you will commend me. I bid you an affectionate farewell, and I shall not forget that you can make the best flapjacks that I ever tasted." Shortly after that Lincoln went to Washington, and Mrs. Berg moved to Chicago, where, at eighty-eight, she still makes flapjacks.



Photograph from Chas. M. Boyer

WILLIAM HOWARD TISDALE was a Confederate spy single-handed. He was called to the White House and made a member of Lincoln's personal bodyguard. He gave advice—as when a weeping widow came to be shot for sleeping on sentry duty. He was shot for sleeping on sentry duty. He could not be bothered, even if her six children died to win a medal in the next battle.

in battles in the Civil War, and caught a as called to the White House and made a called him "Billy," and sometimes took his for clemency for her seventh son, who was the President's secretary told her that the President had been killed on the battlefield. Tisdale lived to win a medal in the next battle.

GEORGE DOUGLAS is the aged janitor of a little Iowa church, and very conscientious; but there was a time when he was a sad runaway. As he entered the train that was to bear him to foreign parts, the first person he met was his uncle with Abe Lincoln. "Hello, running away again, are you?" said Uncle. Later, on asking George's uncle to do an errand, Lincoln said: "Don't worry about the hoy. I will keep an eye on him."

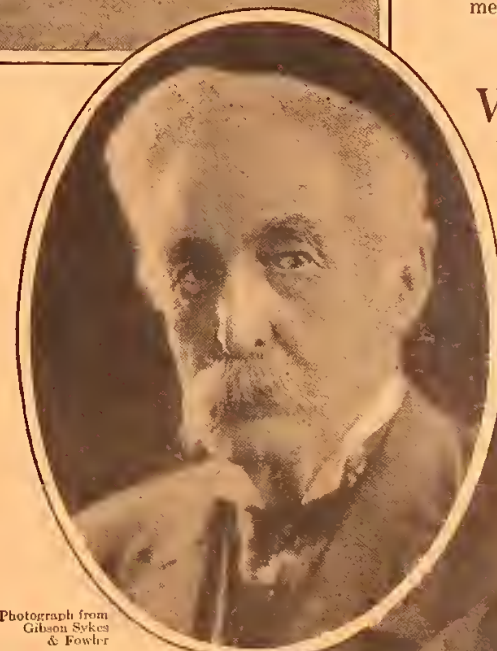
Photograph from Florence P. Clark



HAVING been appointed a war nurse by "Old Abe" himself, Mrs. C. L. Carey lost her way, and was caught by the guerillas near Culpepper, bound hand and foot and held four days, until her girlhood friend General Stonewall Jackson happening by she yelled at him: "Here, you Stonewall, get me out of this!" He did, and on her arrival in Washington again, Lincoln came to her hotel and with a twinkle in his eye said: "I didn't expect you back so soon." Then he gave her a hero medal and an umbrella with a compass in the handle.

WHEN Captain J. H. Edgerly recovered from his wound early in the Civil War, he re-enlisted, and was detailed to the Secret Service, under the personal direction of Lincoln. On one occasion he spent a quiet afternoon reading in the office of a hotel in a Southern city, right opposite a poster offering \$5,000 for his capture, alive or dead. Returning to the White House he was received by Lincoln, in his nightshirt, with: "My God, Edgerly! I never expected to see you again."

Photograph from Carl Schurz London



Photograph from Gibson, Sikes & Fowler

Z. P. HOTCHKISS once told Lincoln to "shut up" right in the midst of a story, and Abe did. It was in November, 1860, and Hotchkiss, one of the first licensed telegraph operators, was on duty at the Chenery House in Springfield. "Abe" was entertaining his friends with stories, and at the conclusion of each the click of the key would be drowned in the laughter. Finally the young telegrapher forgot his manners and shouted, "Shut up!" Lincoln crossed over to the boy and said humbly: "My boy, I beg your pardon."



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A Threshing "Ring"

By S. C. Burt

ANY community co-operative enterprise that has been active for several years and is still popular and prosperous is admittedly beyond the experimental stage. Judged by this rule a neighboring threshing ring organized in 1911 by ten Vermillion County, Illinois, farmers can safely be considered a "going" concern.

Hopelessly tired of waiting their turn after delays some years lengthening into weeks, this group of men met, organized elected officers, paid \$80 each into the treasury, erected a \$300 storage building for their threshing outfit, and were ready to put their ring to ringing all within a week after their initial getting together.

Included in their get-ready movement was the borrowing at six per cent of \$2,200 at a local bank, which, with \$500 remaining in their treasury, was used to purchase a 20-horsepower engine and a 36-60 separator.

Here is the outcome briefly told: Five years later their loan was fully paid, and in addition the conclusion of the year furnished them a dividend of \$28 for each member of the ring. Last year's dividend was \$55 a member after painting their storage building and making all necessary repairs. This year, as this is being written, the ring's yearly accounts have not been reckoned, but the members are agreed that they can count on at least a \$50 annual dividend during the life of their equipment, which, with good care, is depreciating but slowly.

How is such a successful trick turned? Each member has his oats threshed for 1½ cents a bushel (and other grain in proportion) instead of the going and varying high prices usually charged. The money paid by members goes into the fund of the company. Each member also furnishes fuel for his threshing job, and, as the name indicates, the threshing crew is made up of the members or their farm helpers. The variations in the size of threshing jobs are adjusted by the number of helpers furnished, reckoned at a daily wage determined at the beginning of each season.

When the threshing season is completed, the secretary has a record showing the number of bushels of each kind of grain threshed for each ring member, and the number of hands each furnished at the different jobs. The adjustments of debits and credits is then a simple matter.

In addition, the ring every year, after completing the threshing for its own members, allows its outfit to work for conveniently located non-members, but the company invariably furnishes a crew sufficient to operate the engine and separator as a protection against misuse of their machinery.

Could these ring members be induced to go back to the old régime of watchful waiting for the itinerant threshing outfit and consequent wastage of grain and time? The ring refrain, when this question is put, is: "Nothin' doin'."

Oh, for More Like Him!

A COUNT-SEAT newspaper in the Middle West contained this paid advertisement some time ago:

"I will give thirty days of my time to any farmer in Guthrie County who may need services of the kind I can render any time after the first of July until the fifteenth of September. If it is found that I am entitled to any wages for the labor that I can and do perform, same to be donated to the Y. M. C. A. or Red Cross projects. I feel that the emergency is so great and the agricultural interests of the county so necessary that professional men can afford to donate some of their time and labor to filling the shortage made by the boys going to the front."

The man who inserted this advertisement, and paid for it, is a prominent lawyer. He was not bluffing; there is little or none of the "playing to the grandstand" in his make-up. He was born and reared on a farm. He recalls the days when he plowed corn and pitched hay; he can milk a cow as well now as he could forty years ago. After a day or two, to allow time for the long-unused muscles to adjust themselves, he could do a pretty good day's work. And he is willing to do it. He realizes that the farmer must have help. He realizes that farm help is scarce. He is willing to do his bit, absolutely without pay. His offer is bona fide.

How many men are there, the country over, who will make the same offer, who will back it up with actual service? One half of all our lawyers and preachers, our

The Surest Guide to Quality



Tools and cutlery bearing the KEEN KUTTER trade-mark, have always been and always will be of Highest Quality. The Simmons policy of according this brand only to goods of proven superiority, make it a real mark of distinction. **SIMMONS HARDWARE COMPANY**

"The recollection of QUALITY remains long after the PRICE is forgotten." Trade Mark Registered —E. C. SIMMONS.

Plenty of Nitrate in Chile

The amount of Nitrate in the Chilean Deposits is

720,000,000 Tons

At present rate of world's consumption, deposits will last for

300 Years

Shipping conditions are improving. American farmers should learn the FACTS. Write for information.

WM. S. MYERS
Chilean Nitrate Committee
25 Madison Ave. New York

Moles Will Make You Money

By H. F. Grinstead

WITHIN the last few years garments made of moleskins have become quite popular. Not only are they popular, but they bring a good price as well. Unlike other furs, they are prime in midsummer as well as in winter, and are good at all times of the year. The molting periods are in spring and fall, when the fur is least valuable.

To trap moles it is not necessary to destroy the human scent or otherwise try to disguise the work of trap-setting. The telltale ridges and mounds of loose earth betray his presence, so that there is no guesswork about setting traps in the right place. Steel traps are useless, as are also rat or gopher traps. The best types of trap are the scissor-jaw and the choke trap made especially for trapping moles. The common mole trap with sharp spikes that impale the animal is not to be recommended.

Select a fresh run, which is indicated by the sod or soil being pushed upward by the burrowing animal. With a garden trowel cut out a place large enough to contain the trap, the jaws of which should be set as low as the bottom of the tunnel or a little lower. The reason for setting the jaws low is that a mole will always endeavor to go under rather than over an obstruction in its run. Never make the opening wider than necessary to contain the jaws of the trap. When the trap is in place, arrange the pan so that the earth will not pack and prevent the springing of the trap, then fill in the cavity you have dug with loose earth even with the top of the ground.

When practicable, make sets on the main tunnel where it is almost straight for several feet, and select soil that is moist. No bait is necessary.

The skin of a mole is loose. To skin them there is nothing better than a pair of scissors. Slit the skin along the belly, peel down each leg and cut off the feet with the scissors. Tack the skin to a board with the flesh side out, first using four tacks, then four more by stretching between each of these, and again doubling the number of tacks till the pelt is almost circular in shape. Hang up to dry in the shade.

Thirty moleskins will make a ladies' muff of average size, while it will take 600 to make a cloak. If you desire to make up the skins at home, they may be tanned by the following process:

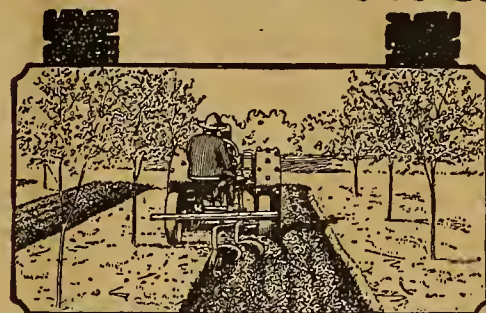
To a gallon of water add a quart of salt and a half ounce of sulphuric acid. Keep liquid in earthen or glass vessel, never in metal. Put the moleskins in liquid, and allow to remain at least one day. Longer will do no harm.

When you remove the skin from this mixture, wash through several changes of water, wring as dry as possible, and rub on the flesh side with a cake of hard soap. Hang the skins hair side out on a line to dry. When the outside surfaces are barely dry and the interior still moist, lay the skin on a board and scrape the flesh side with some blunt instrument like an old file. Thus the inner layer is removed, and the skin becomes nearly white. Stretch and rub as in tanning other hides, until quite dry. It is a common practice to dye the leather side of skins so that the seams will not show.

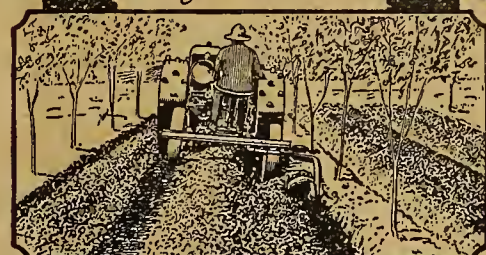
In making up moleskins it is best to blend the fur by selecting only skins of the same shade in the same article.

doctors and merchants, came to the big cities and the towns from the farm; they can still do a good day's work in field and furrow and feed lot. Will they do it? We have mobilized the boys of the grade schools and the high schools; the women and the children are doing their share; what of the men of the businesses and professions who came from the farm and who ought to be glad and willing to get back to it? There's many a girl that might well be reduced; many a pallid cheek that might well be given the flush of exercise and health. It's almost vacation time now. Why not leave the poles and reels and flies where they are, in the attic trunk? Why not put the alluring folders back in the rack at the railroad office? Why not lay aside the promising offer of the "near to nature" hotels and inns and get right down and grub around again in the fresh earth like a man, and for a man? Who'll be the next one to run such an advertisement in his home-town paper as the one above, and back it up with actual service in the fields?

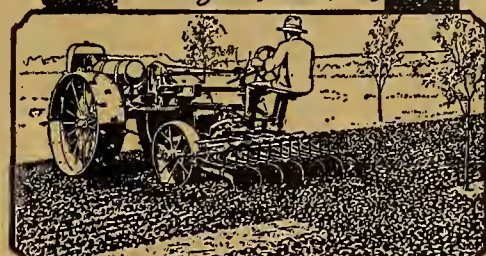
One Tractor and One Implement For All Orchard and Vineyard Work



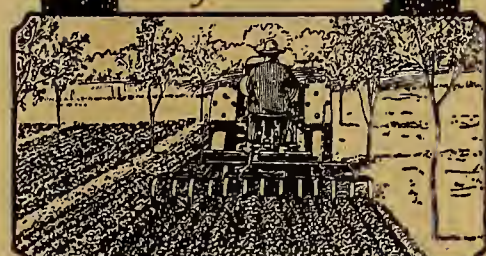
Plowing away from the trees



Finishing the job completely



Thorough cultivation



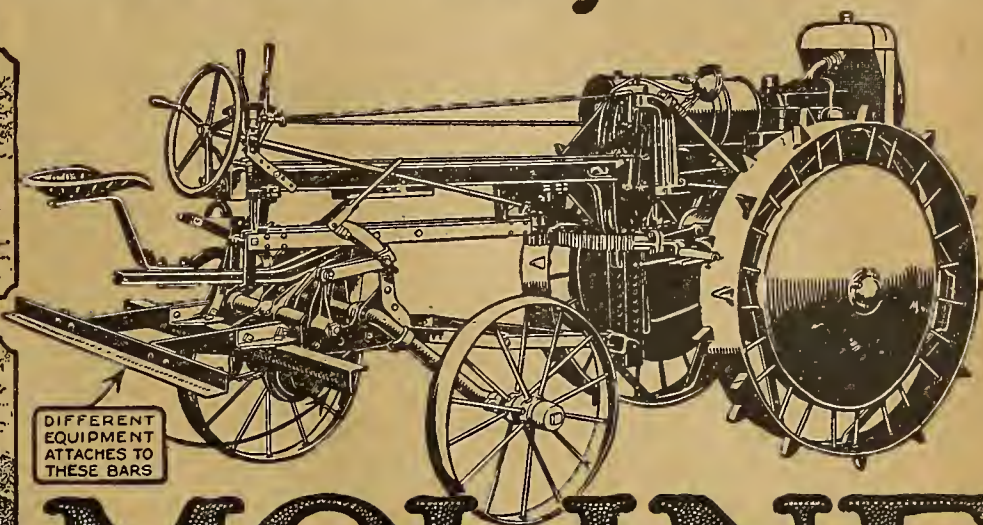
Harrowing a fine mulch



Quick vineyard plowing



Finished in two operations



DIFFERENT EQUIPMENT ATTACHES TO THESE BARS

MOLINE UNIVERSAL TRACTOR and ATTACHOR

With this one outfit the orchardist and vineyardist can do practically all their work and one man can do much more work at less expense than ever before possible.

The Moline-Universal Tractor Attachor is made to work in connection with the Moline-Universal Tractor so that one man has control of both tractor and implement. It consists of an attachor truck equipped with a power lift device and a pair of transverse bars to which can be attached the following equipment: Orchard Gang Plow, Offset Sulky, Straight Sulky, Orchard or Alfalfa Cultivators; Spring Tooth Harrow in two, three or four sections, Furrow Irrigator for orchard or vineyard work, Ridge Irrigator, Vineyard Gang Plow and Crust Breaker.

Thus this one implement does away with all special tools which are used for only a few days out of the year. The Moline-Universal Tractor Attachor combines the main parts of all these machines such as wheels, axle, frame, lifting device, seat and control mechanism. The saving in expense is apparent.

But the improved quality of the work which can be done with the Moline Universal outfit and the saving in time is of greater importance.

For orchard plowing the gang plow is used and the land is plowed as close as the branches of the trees will permit. Then the Offset Sulky or the Straight Sulky is attached in place of the gang plows and the last furrow or two are plowed out right up to the tree trunks. Plowing can be done away from or to the trees in this manner. After plowing the Orchard, the Cultivator or Spring Tooth

Harrow can be readily attached for making a fine mulch. And if irrigation is practiced, furrows or ridges are quickly made by attaching this equipment.

For vineyard work, Moline-Universal Attachor enables a better quality of work to be done, and quicker and cheaper than ever before possible. The vineyard plow consists of a pair of right and left hand bottoms. These bottoms can be spaced wide apart or close together to suit any vineyard rows from 6 to 10 ft. apart. In two operations, with the bottoms spaced wide and close together, all the land can be completely plowed between the rows. Then by using Spring Tooth Harrow and Furrow Irrigators the entire vineyard work can be finished completely.

The Moline-Universal Tractor is especially well adapted to orchard and vineyard work, being light in weight, extremely powerful. All moving parts are fully protected from dust and many other features which other tractors do not have. Aside from this work it can be used for any farm work, including cultivation of row crops and for belt work.

This Moline outfit will make you more profit. If you are interested in orchard or vineyard work, send for folder R. F. No. 84 which explains in detail just how the Moline-Universal Tractor and Attachor are used.

Manufacturers of Quality Farm Implements Since 1865

Plows, (steel and chilled)	Hay Rakes	Scales
Harrow	Hay Loaders	Grain Binders
Planters	Hay Stackers	Corn Binders
Cultivators	Grain Drills	Wagons and
Mowers	Lime Sowers	Moline-Universal Tractor
	Manure Spreaders	

Stephens Salient Six Automobiles

Address Dept. No. 60

Moline Plow Company, Moline, Illinois

Ship Furs!

To the Big House That Pays Big Money

Ship us your muskrat, skunk, coon, mink, rabbit furs, etc., and get your share of the most money ever paid to American trappers and shippers! Get correct grading, unlimited market, prompt payment, and highest prices. Don't hoard furs. Ship NOW! Free Trapper's Guide.

Funsten

BROS & COMPANY
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St. Louis, Mo.

The Practical Collar

Horses Like 'Em

Horses work best when the collars they wear fit snug and firm. Such collars are sure to keep horses' necks and shoulders in tip top condition. Here's a collar that fits perfectly all the time, no matter how the horse changes flesh.

FitZall Adjustable Collars

Instantly Adjusted to Fit Any Horse, Fat or Thin

This collar is no freak. It's simply the standard collar vastly improved. Four sets of holes in the bands in the top fit over pegs in the collar cap, giving four perfect-fitting sizes in each collar. It puts the pressure only where it is needed, nowhere else.

Change it from one horse to fit another perfectly, as quickly as buckling an ordinary collar.

Sold by dealers at the same prices as for ordinary collars of the same grade. Guaranteed. Money back if you're not pleased. If your dealer can't supply you we will. Write for full description and prices.

John C. Nichols Co. 683 Erie St., Sheboygan, Wis.
Manufacturers and Distributors
Makers of the Famous Master-Brand Harness—America's Best

4 sizes in each collar:
17 to
20;
19 to
22

POWER-SIMPLICITY ECONOMY

WATERLOO BOY

ORIGINAL KEROSENE TRACTOR

Dependable Power

that does not fail when your farm work has been delayed and you must take advantage of favorable weather and ground conditions.

Reserve Power

that's available in emergencies—for variable soil conditions or upgrade work.

Simple Power

which the experienced hired man can utilize to full day capacity, at any draw-bar or belt job on the farm.

Economical Power

that insures low operating cost—works all day under full load on 18 gallons or less of cheap kerosene.

Built to Standard Quality

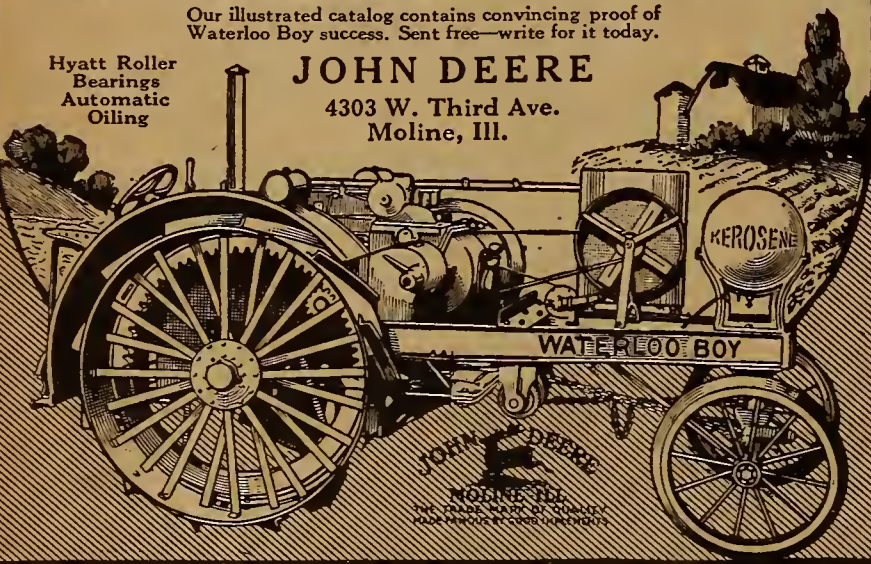
Waterloo Boy fully sustains the quality-fame attained by Waterloo Boy power machines in 25 years' manufacturing success. Backed by a plain guarantee from a responsible manufacturer. Two-speed motor supplies ample reserve power for tillage operations, and belt power for all farm needs, including threshing. All working parts of the Waterloo Boy are easily accessible.

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Bearings
Automatic
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Light Draft Tillage Implements

We are tillage tool specialists and have spent 76 years in developing the P&O line of Light Draft Plows, Harrows, Corn Planters, Cultivators, etc.

P&O Little Genius Power Lift Tractor Plow

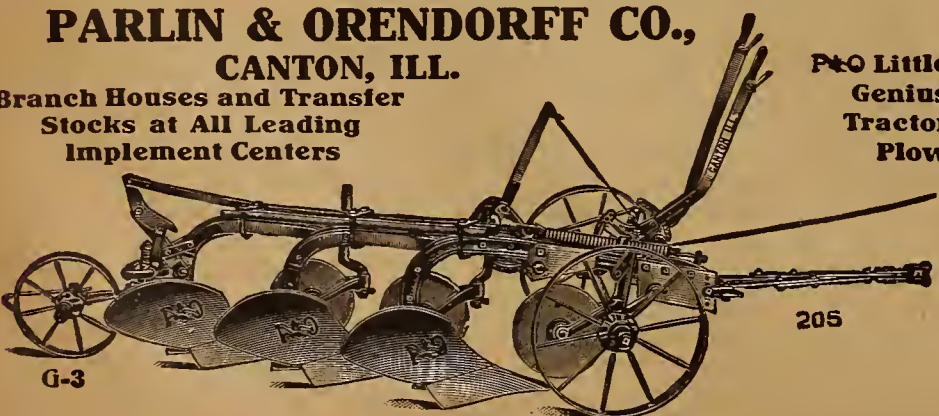
Power lift on all three wheels; adapted to any tractor; perfect bottoms; pin-break hitch; quick detachable shares; high, level lift; single trip rope control. The ideal tractor plow for the one-man outfit.

P&O Goods are sold only through retail implement dealers, but we will be pleased to send our catalog to any address.

PARLIN & ORENDORFF CO.,
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Branch Houses and Transfer
Stocks at All Leading
Implement Centers

P&O Little
Genius
Tractor
Plow



The Shorthorn for Beef and Milk

By Dr. John B. Gingery

THAT the milking Shorthorns are making relatively rapid progress at the present time must be apparent to all who try to keep well informed with reference to cattle interests. The progress during the last few years is surprising. Even in Britain, the home of milking Shorthorns for two hundred years, values have gone up within the last ten years more than they did during the previous century. At the dispersion sale of the late George Taylor, in 1912, only six years ago, 189 animals sold from his Cranford herd at an average of more than \$400. This was by far the most famous herd in Britain at that time. In 1917, 93 animals sold at a dispersion sale of the late Lord Lucas averaged \$935. Previous to the sale of the George Taylor herd breeders were content with an average of \$200. The cow Primrose Gift sold at the Lord Lucas sale for \$3,750, a price unheard of and probably undreamed of in former decades.

This great rise of values in Britain is not owing to an advance in appreciation of the farmers for milking Shorthorns, as for many years past more than 80 per cent of the milk used in Britain came from these cattle, pure-bred and grades. It is due in part to the advance in values in all classes of cattle caused by the war, but in a far greater degree to the phenomenal increase in the demand for this kind of cattle from America, the British colonies, and other countries.

In this country the advance made by this class of cattle is far greater than in Britain. Only a few years ago they were never seen at any of the leading fairs; now they are shown at many. Some of the shows are now anxious to take the lead in furthering the interest of the breed. Notably is this true of Minnesota, a State in which ridicule has been poured on the milking Shorthorns more than any other place in the Union. For advocating the cause of milk and meat cattle the writer has been charged by men in high places with having caused a loss to farmers running up into millions. If I thought that charge were true, it would indeed give me profound sorrow. A few years ago the milking Shorthorn interests were nearly everywhere spoken against. This attitude in public and in public print has almost entirely ceased. A few years ago \$200 was considered a fair price for a mature female of the breed. At the draft sale of L. D. May, Granville Center, Pennsylvania, held a few months ago, the average paid was more than \$1,000.

Let the breeders give due attention to

the maintenance of fleshing propensities of the breed, thus giving the black eye to the idea that a Shorthorn must be lean and leggy to be a milking Shorthorn. Let the breeders use bulls of good depth, and a frame that can be loaded heavily with flesh. Let the breeders, as a rule, be content with good average milk production with all the flesh they can obtain along with it. An average of 8,000 pounds of milk a year should satisfy the average breeder. Of course, a phenomenal record will make a good advertising card. Such records, however, may be usually left to the dairy breeds.

Let the breeders advertise judiciously when they have stock for sale. Any successful breeder of milking Shorthorns will find that it will pay him to run a card in one or more papers that will best reach his constituency of patrons. Let him advertise by showing some animals at the fairs. This can be done at near-by fairs at small cost, as the animals shown do not have to carry so much flesh as those of the beef breeds. At the recent Minnesota fair the only exhibits came from Minnesota and Ohio. Both of these exhibits were of high quality, but the number of exhibits should have been greater. A strong effort will be made to place milking Shorthorns on a par with the other milking breeds in the prize list of the next fair. This of course, if it is to succeed, must be accompanied by a guaranty from the breeders that the animals shown should not be fewer than a certain minimum.

Let bull sales be held from time to time, at which the public may have a chance to select and buy at convenient centers. The importance of this step is coming to be recognized by the breeders. An evidence of this is shown by the fact that at the annual meeting of the American Milking Shorthorn Breeders' Association, held in St. Paul on September 8th last year, a committee was appointed to take steps to arrange for such a sale to be held at South St. Paul. This will aid the public in securing the bona-fide milking Shorthorns. The catalogue will not only give the pedigree but also some facts about the milk production ancestry. This will tend to check that practice, all too common, of selling the lean and more leggy animals as milking Shorthorn bulls when no facts are furnished about milk production in the ancestry. No farmer should buy a milking Shorthorn unless he can obtain such evidence. The bull sale is a grand step forward.

"Why My Tractor Has Come to Stay"

[CONTINUED FROM PAGE 9]

me last spring when the machine stripped a gear, which broke down the housing. Later we replaced one drive pinion on the crank shaft. Right here is where I convinced myself of the need of horses on the farm where a tractor is used.

Knowing the trouble I had in getting repairs, I took out my automobile and made a trip to Milwaukee. It took me thirty-six hours to make the trip. The reason I did this is because of the time it would take to get the gear by shipment, the railroad situation being so uncertain. Moreover, I didn't want to order it through the agent, because of the red tape the order would go through before the stuff was even shipped.

I knew these things from experience, and wanted action, as planting was on in full blast, and time meant money to me. I got the repairs all right, adjusted them, and the tractor has run ever since without much trouble.

It was necessary that I go to Milwaukee for the repairs, as the agent doesn't handle them. It seems as though the tractor makers will not send repairs to the dealers for sale when a customer applies; the dealer must put his money into the supplies, and then wait until someone breaks down before he can get his money back. For this reason my agent does not handle a full line of parts.

Your Experience with Tractors

WHAT has been your experience with tractors? If every tractor-owner who reads this will write us and tell the things, good and bad, that he has learned about his machine, we will have the facts with which to approach the tractor makers and get you some very definite answers to your tractor problems. We will pay \$15, \$10, and \$5 for the three best letters received, and we will pay for any others we may print. If you do not want your letter printed, say so and we will hold it out. Be sure to give us the details, the kind of tractor used, what it was used for, and just wherein it failed or succeeded in doing its work. Address Contest Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York. Look for information about the contest winners in the May issue. All letters should reach this office not later than February 20th.

THE EDITOR.

He Deserves Good Treatment

By Dr. John Benson

DO YOU give your farm horses a square deal? They will labor for you from ten to twelve hours a day, six days in the week, and feel amply repaid if given a good meal and plenty of cool, fresh water.

Perhaps you don't, but many owners often consider themselves overworked if they have to throw a harness on the team, dump a little manure out of the barn window, and hitch up. And to furnish the work horses a bracing feed, give them a good currying, or a bed of straw is extravagance. It is done for fast-trotting stock and pure-bred horses, why not for the average work horse?

The horses that do the heavy work about the farm should be conditioned. It is as necessary for them as for other stock, and



The farm mare does a double duty: she works, and she raises colts

more so. The farm horse has a hearty appetite, a vigorous digestion, and responds, as does no other animal, to intelligent care. To condition horses does not mean that they must be put on a training table. Start a regular, businesslike method of feeding, watering, handling, and caring for them.

A bushel of corn or oats for one meal and a pint at another time has a bad effect upon a horse's wind, digestion, and working ability. Give the preparation of the farm horse's feed much attention. Two pounds of provender daily to every hundred pounds the horse weighs is a good plan. Always grind the grain; and, as most hay is usually dusty, sprinkle it with water. If the horse's work is very hard, decrease the hay and increase the grain. Place four or five egg-size lumps of rock salt in the feed box. These the horses like to lick, and they also prevent hasty eating.

Give the horses a long, full drink of water the first thing in the morning. Then place a third of the day's grain and a fourth of the hay ration before them, at least an hour before starting to work. Throw in the manger just a small amount of hay.

While the horse is eating its grain, vigorously apply, for about five minutes, a heavy brush. While the breakfast in the farmhouse is keeping you busy, the horse will have eaten all the hay. Then throw on the harness and give the animals another chance at the water tank or creek. Good work will be done until noon by a team so cared for.

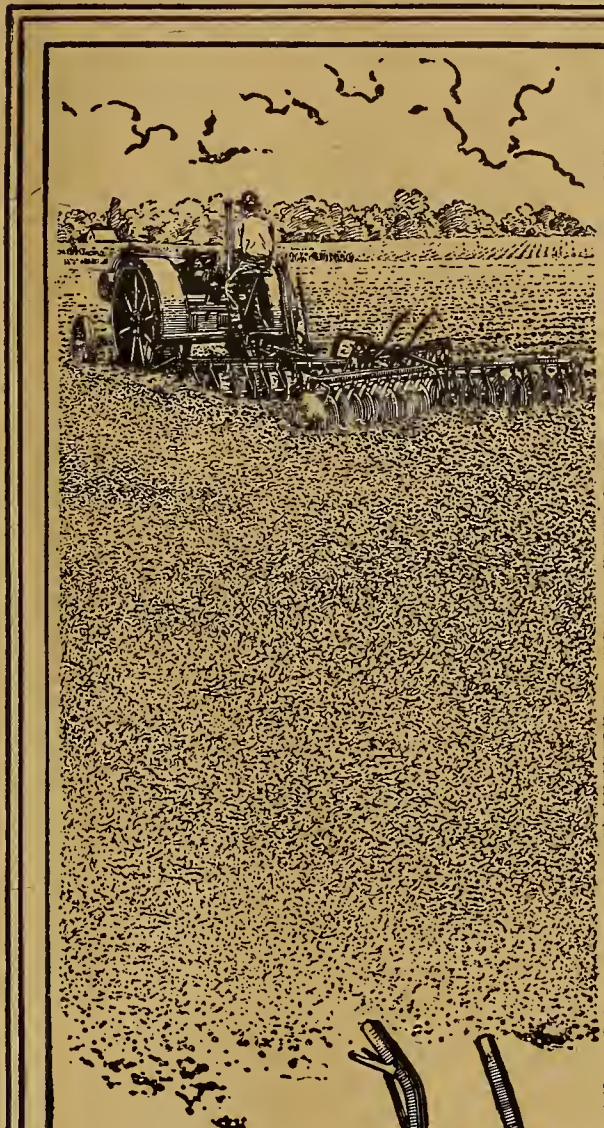
Give the animals a hurried rub-down as they take a short drink. Supply another third of the grain and the hay ration, and let an hour, at least, lapse while you and your horses rest. Another cooling drink before you start encourages the horses to do their best in the afternoon.

Quit the work before the sun is lost. If you don't, sooner or later this practice of working in the dark will impair both you and your horses. Pull off the harness, letting the horses take only a little water. Feed them the remaining third of the grain ration and half of the day's hay allowance.

If it is summer-time, clean the horses after supper, then turn them into a corral or pasture, and they will add the finishing touches to the work of currying and brushing. During the winter fill the manger full of slightly moist hay at night, give them a comfortable straw bed, and contented, healthy animals will result.

When you start spring work, take it easy for a few days. Nothing hits a horse so hard as to be compelled to pitch right in after a winter of idleness. Many a good animal has been ruined during the first few days of the spring rush.

30 Years' Experience Building Disc Harrows



COMMENCING with the light, horse-drawn, single-action disc harrows, following with the double-action, later the heavy engine disc harrow and now both heavy and light tractor disc harrows, the John Deere factory specializing in the manufacture of disc harrows is rounding out thirty years' experience in this line of work—thirty years of unusually successful disc harrow building experience. That means that the buyer of a John Deere Tractor Disc Harrow isn't getting an experiment—he is assured of satisfactory service.

JOHN DEERE TRACTOR DISC HARROWS

The JOHN DEERE PONY TRACTOR DISC HARROW is for use with any standard tractor; clevis is adjustable to suit height of tractor drawbar.

Flexible—equipped with a powerful pressure spring. Penetrates and pulverizes as desired because low tractor hitch and low coupling between front and rear gangs hold discs to their work. Light running; no dragging around corners; rear gangs trail properly and run steady because the reinforced goose-neck connection to rear gangs is attached ahead of the front gangs.

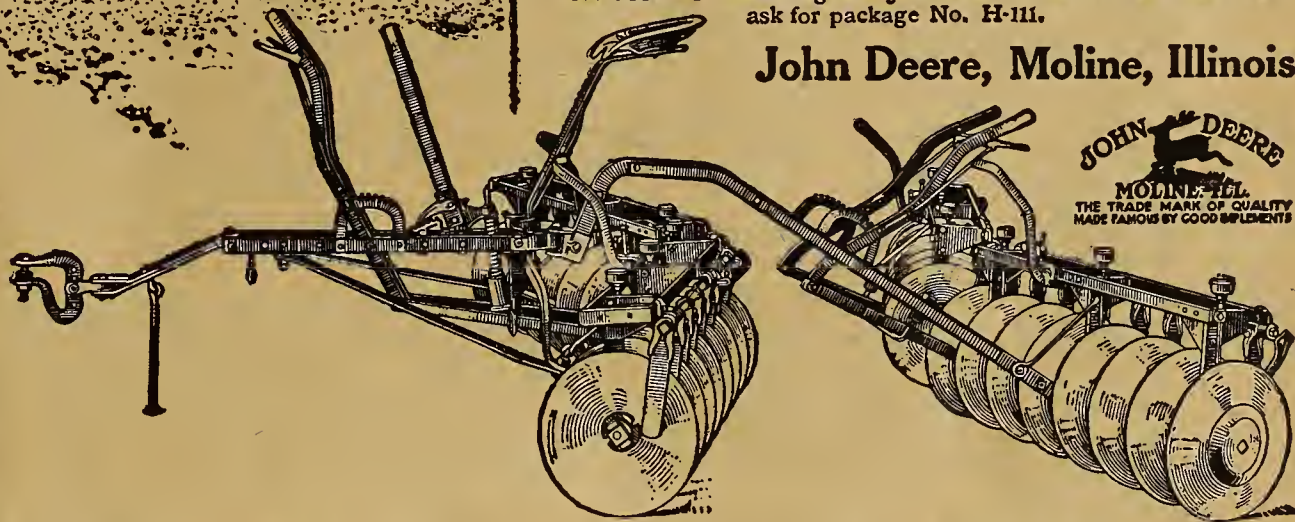
Unusually strong—all steel main frame, double-bar gang frames, riveted throughout.

All standard widths, with standard size discs. Easily converted into horse-drawn, single- or double-action harrow by using proper hitch. The JOHN DEERE HEAVY TRACTOR DISC HARROW is extra heavy and strong for difficult work.

Get More Profit From Your Tractor

Use it to pull a John Deere Disc Harrow. Write us today for free booklets describing the John Deere line of Disc Harrows—ask for package No. H-111.

John Deere, Moline, Illinois



John Deere Pony Tractor Disc Harrow

Throw Away Your Back Breaking Money-Wasting Churn!

Write for FREE BOOK about this New Way to Make Butter. Save 1/4 to 1/2 usual time. Churns, works, washes, salts and moistens butter at one time, ready for packing, in less than 25 minutes. 20% to 25% more butter from same cream. Wonderful quality butter brings 10 to 20 cents above market price per pound.

NEW WAY To Make Butter.

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BOOK FREE. Mail postal today. Free book shows how the Minnetonka pays you \$30 to \$60 extra per cow per year. Also shows how you can earn a Minnetonka free.

Davis-Watkins Dairymen's Mfg. Co. Dept. 62, 130 N. Wells St., Chicago



Kalamazoo TILE and WOOD Silos



"The World's Standard"

are the result of over twenty-eight years' study and experience in silo construction. They are easily and quickly erected, and will keep your silage in perfect condition indefinitely. The famous Kalamazoo Galvanized Steel Door Frames and Continuous Doors used in both kinds.

Write for Catalog. It illustrates and fully describes the many exclusive features of Kalamazoo Silos. You can buy on easy terms if desired.

Kalamazoo Tank & Silo Co. Dept. 248

Kalamazoo, Mich.

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Helps Your Horses - Saves You Money

The horse is a vital factor in greater farm production. To realize the best results he must be kept one hundred per cent fit.

STUFFED COLLAR PADS

Filled with our Special Composite Stuffing

are the only guarantee against bruised, galled and chafed shoulders. They are better than other kinds, being soft, springy and absorbent. They also make possible the continued use of a horse collar long after its worn condition would otherwise compel its discontinuance.

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Consists of wire staple with felt washer. It gives hook a firmer hold and prevents pulling off, even though fabric is weakened by long usage. Life of pad is thus materially lengthened. This is the greatest improvement since we invented the hook. Ask your dealer for Tapatco Booklet.

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*Specified and used by
the U.S. Army and Navy
the Red Cross and the Y.M.C.A.*



ARMY

Delco-Light was selected by the U. S. Government to furnish electricity for light and power, in places and under conditions where the utmost dependability was necessary.

More than four thousand Delco-Light plants were delivered for war work. They were used to supply electric light in camps, storehouses, hospitals, Y. M. C. A. huts, airplane hangars, sub-chasers, and other branches of the service.

In Red Cross hospitals at the front, Delco-Light operated life-saving X-Ray apparatus.

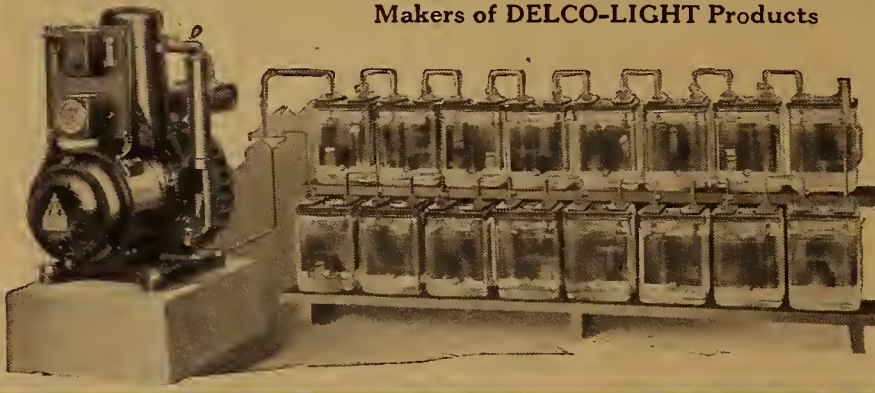
Delco-Light was specified by the Government because it is dependable, efficient, simple to operate,—requires little attention, and because it is AIR-COOLED.

The result of Government tests and the satisfactory use of Delco-Light on over 60,000 farms are your assurance that Delco-Light will give you the same dependable service.

It better living conditions,—increases farm efficiency, and soon pays for itself in time and labor saved.

THE DOMESTIC ENGINEERING CO., Dayton, Ohio, U. S. A.

Makers of DELCO-LIGHT Products



DELCO-LIGHT is increasing efficiency on more than 60,000 farms

Our Double Corncrib

By A. L. Roat

WE HAD considerable annoyance with the old-style corncrib on our farm, so we decided to build a more efficient affair. After due consideration we selected the style shown in the picture of the double crib.

This is set on concrete pillars which are four feet under ground and three feet above the surface. The crib is just off the edge of the lane outside the barn. It is built of wood and lined completely inside with wire mesh to keep out rats and mice. A door at each end of the crib opens on the driveway between the cribs, and there are two trap doors convenient for filling.

The driveway between the cribs is concreted, and the hay wagon and spreader are stored there when convenient. We can



A lining of wire mesh keeps the rats out of this crib

store two loads of corn in the driveway when it is too late in the day to unload. A sliding door closes each end.

The corn has remained in excellent condition in the cribs the two seasons since it was finished. The floor of the crib is three feet above the surface of the driveway, thus enabling air to get to all sides of the corn.

Little Heat Savers

By F. M. Williams

NO MATTER how well a house is built the window sashes become loose and the exterior doors shrink in time. The joints around the sashes and the doors become wider for the cold winds to blow through, and you wonder why you cannot heat your home successfully.

The openings should have weather strips if you expect to get the best results from the heating plant. With that precaution the fuel bill will be cut down perceptibly, and you will have the comfort of a well-heated house.

There are patented metal weather strips made—the kind that are mortised into the sashes or the frames. Those are more expensive than the others because they are covered by patents and require an experienced carpenter to fit them. But they are excellent both for wear and efficiency. You are not compelled to replace them, as is necessary with the cheaper kind.

Laundry Conveniences

By W. F. Mills

EACH house should be equipped with a laundry. It is a necessary acquisition to a modern house, and cuts down the drudgery of the unpleasant side of house-keeping to a great degree. The tubs should be stationary and supplied with hot and cold soft water. For rinsing the clothes one tub must have a supply faucet with cold hard water. Otherwise the capacity of the cistern will be taxed for cold rain water.

The floor should be cement, and that is where care must be used to guard against rheumatism caused by dampness in the ground.

Build a platform of joists and flooring six inches high and large enough in area to hold the tubs and the person who works there. The feet, most of the time, will not touch the cement, as there will be an air space between the two levels.

You, Too, Can Earn \$250.00 Monthly!



WALTER KALEY

You can do it because it is being done now—every month—by the two young men whose photos we show. You don't have to be unusually well educated, gifted or clever—you need, instead, gumption, grit and belief in yourself.



HARVEY KALEY

THE two young men, whose pictures appear herewith, are examples of what you, too, can do, if you will simply make the start. Their names are Walter and Harvey Kaley. They are brothers. Only a comparatively short time ago they were both engaged in an entirely different line of work—routine, mechanical work that did not pay them a suitable income. Naturally, they became dissatisfied, because they were normal young men, who wanted to "get ahead"—to be somebody. Walter was the first to investigate our proposition and was so convinced of its opportunities that he also induced his brother Harvey to take up the work. They are each now drawing more than \$250.00 a month.

Investigate NOW—Use the Coupon!

We are increasing our sales force. We have several openings right now that offer splendid opportunities to young men of energy and perseverance.

It will place you under no obligation to investigate our unusual, money-making proposition. It may be the turning point in your life—the beginning of a brighter, more prosperous future.

If you are now earning less than \$250.00 a month, sign your name to the attached coupon, clip it, and mail TO-DAY.

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For 1919 Galloway is making greater offers than ever before. With the war over and Peace here, the American farmer must feed the world. My low, direct to you factory prices on highest grade implements give you wholesale savings. Don't pay two and three prices for your farm machinery.

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Get your implements straight from Galloway's factories. I cut out all waste and lost prices by selling direct. One million satisfied customers use Galloway implements and save big money. You can do the same. Write today for Galloway's 1919 book.

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1919 model is ready. Have all the latest and best improvements. Over three hundred thousand in use. Thousands sold annually. Each one sells from one to a dozen more. Is closer skimming, easier cleaned and more sanitary than any other separator built. All parts run in constant spray of oil. No sharp edges to break up globules. Four good sizes. 375 lbs.—500 lbs.—750 lbs.—950 lbs.—at four low prices.

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The best ever for 1919. Has 11 great exclusive spreader improvements that put the Galloway in a class by itself. Steel-beater, wide spreading V-rake—automatic stop—clean out push board—roller feed—chain drive—endless apron with force feed—cut under front wheels, short turn—is extra light draft—handles more manure for less cost on man, team, and pocket book than any other spreader built.

Magneto Equipped 1919 ENGINES

Galloway's 1919 new model engines are more powerful, more economical than ever. 2 1/2 to 12 H.P. Portable or stationary. Has valves in head, no lost energy. Big bore, long stroke and heavy weight. Special built-in magneto supplies blue hot spark, needs no batteries. Easily started, no cranking, cylinder and water pot frostproof. Burns any fuel. Heavy or light work models for the lightest to the heaviest, toughest job on your farm.

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Get your copy of Galloway's money saving book for 1919. Buy all your farm supplies at wholesale—direct from Galloway's factories. Use this book as your buying guide. We ship from our immense factories at Waterloo or big warehouse stocks in Chicago, Kansas City, Council Bluffs, St. Paul and Winnipeg. Write today to **William Galloway Company,** 397 Galloway Station, WATERLOO, IOWA.

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When Frost and Wind Get Fooled

By Florence L. Clark

FOR eight years R. M. Maxam has been growing cabbage and truck crops away up in North Dakota near the Canadian border in a wind-swept prairie country. So strong is the wind at times in that locality that where no windbreak has been provided the leaves are whipped and broken from cabbage and other brittle growing plants. But by making a study of varieties and cultural requirements, Mr. Maxam is now able to be reasonably sure of good crops of most staple truck and garden crops—even muskmelons—commonly grown in latitudes much farther south.

Trees and shrubbery do not grow as rapidly in the northern climates as they do farther south, so, to prevent wind damage to the more delicate garden crops, he plants strips of corn with truck crops between, until his windbreak hedges and groves are large enough to answer that purpose.

From Well-Driller to Governor

By O. W. Coursey

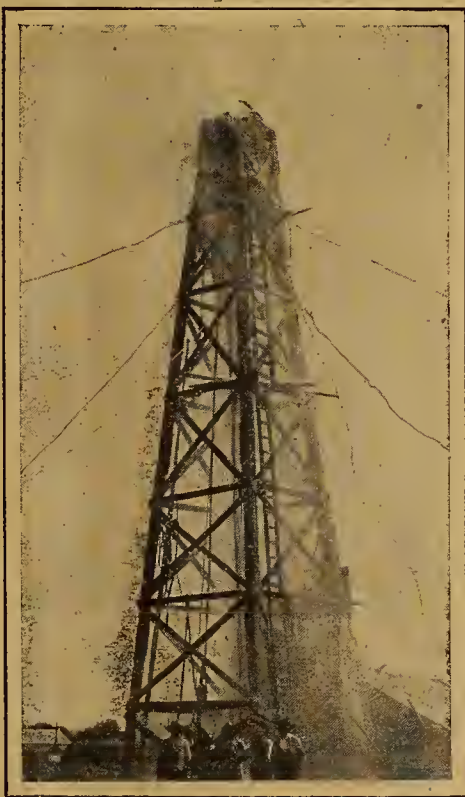
WHEN executive duties fall upon Governor Peter Norbeck of South Dakota, he gets out his drilling outfit and sinks another oil well—and the governor is great on striking oil.

Mr. Norbeck drilled his way to the governor's chair. He was born in South Dakota in 1870. It was a territory then, and the state is proud that, although it isn't thirty years old yet, it has at its head a man born within its own borders.

Governor Norbeck grew up on a farm, and the days he passed in school were few and far between. When he was twenty-five the great oil basin of South Dakota was discovered; and, although Peter Norbeck hadn't a cent of capital, he decided to quit the farm and go into the well-drilling business. He and his partner, Erickson, bought an outfit, and Norbeck borrowed the \$130 with which to pay his half.

Money was scarce and the partners took a harness in part payment for one well, a wagon for another, and a team of horses for a third.

In this way they secured the power to move their outfit about the country without depending on the farmers. They bought a second rig and put another crew



at work. Erickson dropped out, and a man named Nicholson took his place.

The partnership has lasted twenty-one years, and the firm has had as many as 52 drills running at one time. Recently Governor Norbeck and his partner sold one tract on which they had struck a "gusher" for \$640,000, so war-time prices need not make South Dakota's governor look askance at his \$3,000 salary.

They tried out Mr. Norbeck in the state senate and on the lieutenant-governor's job before making him boss of the State—which he is said to manage as efficiently as he does the business of drilling wells.



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Every building on your farm can be covered with S-P-C Roofings. The five different S-P-C brands are made especially to meet all your roofing needs.

It makes no difference whether you are considering roofing for residence, barn, corn crib, or chicken house. Some S-P-C brand will suit you from all standpoints—finish, quality and price.

S-P-C Roofings

are made by the Standard Paint Company, the pioneer manufacturer of ready roofing. Experience gained through more than a quarter of a century is back of every roll. That is why each of the five S-P-C brands is the best that can be bought at the price.

These brands are Imp, Cronolite, Zylex, Starex and Slatex (slate surfaced shingles and roll). They vary in finish and price. Tell your dealer the kind of building on which the roofing is to be used and the price you wish to pay. He will show you the brand that meets your ideas. Or, if you prefer, he will show you samples of all five brands and you can take your pick.

Remember that the S-P-C circle trade-mark shown below appears on every roll of S-P-C roofing and on the cover of the sample books. It is a good guide to follow when looking for ready roofing.



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Feed Cooker and Agricultural Boiler
For hntchere, sugarmekers, poultrymen, stockmen, dairymen and fruit growers. Portable; use indoors or out, as boiler or stove. Burns chunks, long sticks, cobs — anything. Guaranteed.

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THE Canadian Pacific Railway offers a wonderful opportunity to own a farm, achieve independence and grow rich in Western Canada. It offers you farm lands on the rich prairies of Manitoba, Saskatchewan and Alberta for eleven to thirty dollars an acre, or irrigated land up to fifty dollars an acre.

Twenty Years to Pay

You pay down 10%. Then you have no payment on the principal until the end of the fourth year; then fifteen annual payments. Interest is 6%.

\$2,000 Loan to the Farmer

Loans are made to approved settlers on irrigated farms—with no security except the land itself—up to \$2,000 in improvements. You have twenty years to pay back this loan at 6% interest.

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The Canadian Pacific is not a real estate dealer, in the ordinary meaning of the term. Its prosperity depends upon the prosperity of the settlers along its lines of railway. To get good settlers and to make them keep prosperous, it offers terms and assistance which would otherwise be impos-

sible. And this offer applies to the wonderful prairie lands of Alberta, Saskatchewan and Manitoba—the richest grain and stock land in North America. 45 bushels of wheat, 100 bushels of oats per acre, are frequently produced on this land. Average crops exceed any average elsewhere in America.

Lands Under Irrigation

In Southern Alberta the Canadian Pacific Railway has developed the largest individual irrigation undertaking on the American continent. The irrigated lands are sold on the same easy payment terms—prices range up to \$50 an acre.

The Canadian Pacific Railway will not sell you a farm until you have inspected it. To make this easy, special railway rates have been arranged. Write for particulars and free illustrated booklet.

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Supt. of Colonization

Canadian Pacific Railway
902 First St. E. Calgary, Alberta

M. E. THORNTON, Supt. of Colonization
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I would be interested in learning more about:

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- ☐ Special railway rates for home seekers.
- ☐ Business and industrial opportunities in Western Canada.
- ☐ Town lots in growing Western towns.

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There will be some of the thousands of soldier boys now daily receiving their discharges from the Army and Navy, who, because of changed business conditions, will be unable to go back to their former connections—others, who, because of changed habits, ideals and ambitions, will not want to.

We have openings in our Sales Organization in nearly every state that pay from \$35 to \$75 weekly. These positions offer an unusually free, outdoor life—a life you can really enjoy as your work. Sales experience desirable but not absolutely necessary. In replying give age, status while in U. S. Service, and nature of former business experience. Address

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How to Run the Gas Engine—Simplified

30 CENTS

Why Motor-Truck Hauling Pays

By H. H. Haynes

IN THESE days of farm-labor shortage it doesn't behoove any of us to scorn a mechanical device that will even in part take the place of a man. The motor truck for farm hauling, according to a painstaking investigation by Frank Andrews of the Department of Agriculture's Bureau of Crop Estimate, has proved its right to be placed in the agricultural sun.

Did you know that it is an established fact that one man driving a five-ton truck can haul more produce to market than three teams, three wagons, and three men? And it can cover three times the distance that those three men with wagons can cover in a given time.

Hence, we have the illuminating fact that one man and one five-ton truck can do the work of eight men, eight wagons, and sixteen horses.

Figure up, just for fun, how much eight men, eight wagons, and sixteen horses would cost you over a period of a year, then figure the cost of one man and one five-ton truck, including the purchase price of the truck, and see how long it would take truck and man to pay for themselves. And don't forget that there are trucks as light as one-ton for the smaller farmer who wouldn't use so many men, horses and wagons on his farm.

Mr. Andrews' figures are based on reports from every section of the country,

Of the 1,473 county reports which were received, Andrews tells us that 898 mentioned motor trucks being used in hauling from farm to shipping points. In a large fraction of these counties, motor-truck service was just coming into use in hauling produce from the farm. There were many reports of use for light traffic, such as poultry, eggs, and vegetables.

Two reporters claimed the truck to be a necessity in their localities to fruit-growing on a commercial scale, on account of the long time required for wagon trips and the scarcity of farm labor. In many States hogs were hauled preferably in motor trucks on account of the relatively small amount of shrinkage compared with hauling in wagons. Some counties reported hogs hauled exclusively in motor trucks, although these vehicles had not yet come into general use for hauling grain or other products.

Thousands of individual motor trucks engaged in intercity hauling are duplicating, in time and tonnage, the work done by a corresponding number of freight cars. A railroad train of 90 cars will haul no more merchandise than a caravan of 90 trucks.

The average freight car travels but 20 miles a day, and a motor truck will travel 100 miles in the same time. The average capacity of a freight car is 75 tons,



This man with his five-ton truck can do the work of eight men, eight wagons, and sixteen horses. Who says a motor truck isn't economical?

and for all sorts of hauling, and include not only the trip to town with the load of grain, produce, or stock, but also the return trip, which may be turned into profit by bringing back supplies necessary to the ordinary farm operations.

"The estimated cost for hauling in wagons from farm to shipping points," says Andrews, "averaged in 1918 about 30 cents per ton mile for wheat, 33 cents for corn, and 48 cents for cotton; for doing the same hauling in motor trucks or by tractors the averages are 15 cents for wheat or corn, and 18 cents per ton mile for cotton."

"While most of the hauling from farms is done by the farmers themselves, these estimated costs are based largely on the usual charges in the various counties for hiring team and wagon or for motor truck by the day."

Andrews also says that motor-truck hauls in 1918, from farm to shipping point, averaged 11.3 miles, while wagon hauls averaged 9 miles. The motor truck made 3.4 round trips per day over its longer route, while the wagons made but 1.2 round trips over the 9-mile distance. If the trucks carried no more at one load than the wagons, the increased number of trips alone would place them in the lead. But the fact is, taking wheat for example, that the average wagonload was 56 bushels, while that of the motor truck was 84 bushels. Ear corn shows the same increased capacity in favor of the truck, the wagon hauling 39 bushels, with the motor truck averaging 58 bushels.

and while a five-ton truck carries but one fifth of the load of the railroad car, it travels five times as fast, thus equalizing the freight car's performance.

Extensive plans are being made to assist the farmer to haul his crop to market or to a central station, saving his time for work on the farm.

Several thousand motor-trucks are now on rural express duty, but to encourage additional operators to enter this unlimited field return bureaus are being established in hundreds of communities. By telephoning the bureau in his community the farmer may leave word for returning trucks to pick up implements or supplies, thus saving him the time and expense of a trip to town.

The idea of the rural motor-truck service is to accommodate the farmer who is unable to buy a truck of his own. It will serve to bridge the gap until he can afford private ownership.

It is a question whether the trucks are bringing the good roads, or the good roads bringing the trucks; but, whichever may be the case, the two are inseparable. The truck cannot compete with the team and wagon on a bad road, just as it is impossible for the wagon to try to keep up with the truck on a good road. A good road is one that will permit truck and motor traffic the year round, and not for certain months alone.

If you live on a good, hard-surfaced road, look closely into the motor truck's economy for hauling purposes. It will pay you well.

The Mystery at Glen Cove

[CONTINUED FROM PAGE 14]

he here before—it occurred?" I asked. "I thought of that, and I asked Mrs. Debreth. Two weeks." "And before that?" "He came from Boston." "Who was he with?" "The Meltons." A thought flashed over me, rather startling in the inference which might be drawn from it. "The Fall River Meltons?" Steele nodded. "You know who they are?" "Only socially." "Not commercially?" "No." "Well, they're boat builders. And it's not generally known, but they're building submarines." Steele caught the idea at once. A long whistle escaped him. "By George, the thing squares up! The Meltons, I happen to know, got him from Bar Harbor. He was with Admiral Barron all last summer. You know—the constructor." A thought seemed to strike him. "I know the admiral's nephew, Billy Rutledge. He has a place over at Westchester. I think I'll ring him up." All his indolence gone in the new excitement of the chase, he leaped to his feet and went into the house. I remained moodily staring at the dancing waters of the Sound. It had been a very hard night for me, and I was content for the moment merely to drowse. But my repose was brief. Out of the tail of my eye I caught a quick movement in the room to one side of me. I turned around quickly. I could see nothing. But it was impossible to deny that I had seen something. Both of the Debrethts were out, I knew. It might, of course, be a servant. I rose quietly and slipped into the room. It was empty. I heard a faint footfall on the stairs, followed by the sound of a creaking board on the floor above. I COULD hear Steele, in the telephone closet of tragic memory, trying to get his connection. As noiselessly as I could I crept up stairs, pausing at intervals to listen. Then, just before I reached the top, I heard a kind of faint metallic squeak. It was some seconds before it dawned upon me what it was. I raised my head to be certain. The sound came from the receiver of an extension telephone in the hall on the second floor. With the receiver at his ear, and a look of furtive intentness on his blank features, sat Toguchi, the butler. I stole down the stairs and hurried to Steele. I met him as he was coming out of the booth. "Did you get him?" I inquired in a clear, loud tone, which could not but be heard up-stairs. "No—out of town." "Too bad," I said regretfully. "I've been wanting to have that match with Billy for a long time." Steele stared at me blankly. But at my vociferous winks he took his cue and joined in helpfully. "He's a wonder with his irons, isn't he? I'd give a good deal myself to get in a few holes with him. I wonder where he's gone?" Still chatting about our mythical golf match with Mr. Rutledge, we strolled out on to the veranda and, at my suggestion, continued across the lawn. One can only be safe from eavesdropping where he can see for fifty yards in all directions. Briefly I recounted to Steele what I had discovered. To my surprise he grinned broadly. "As a detective, Jimmy," he said amusedly, "you're surely a humdinger. But as a judge of intelligence you're—you're insulting." "Would you be good enough to explain?" I asked stiffly. "My dear fellow, do you really suppose I intended to spill all I thought into that telephone? Don't you know that the telephone is the poorest keeper of secrets known to man? Why, I was going into an elaborate yarn about some bonds I wanted to realize on, ending with a purely matter-of-fact request for an appointment downtown. I had no definite suspicions, to be sure, but I don't take chances when I don't have to." "Oh," I muttered, having nothing better with which to cover my humiliation. "Still," he went on, "your information certainly crystallizes a suspicion. 'Our

[CONTINUED ON PAGE 53]



Good hides make your cattle worth more money

Leather tanners are very careful about the hides they buy. They want hides that are as nearly perfect as possible — hides that are without cuts and scores, and that are properly cured. There are two classes of hides on the market—"country hides" and "packer hides." Country hides are those taken off by small butchers and farmers. Packer hides are those taken off by the packers.

To take a hide off correctly is not easy. Unless great skill is used the hide will be marred by cuts and scores. The packers have made a careful study of hides. They have trained experts who do nothing else but take them off. Hence, packer hides have few cuts and scores, and are uniformly and properly cured. Swift & Company sorts its cured hides into grades or classes, according to quality and to the purposes for which they are best adapted. Some country hides are good; others are very poor. They usually have cuts and scores and are not cured so well. Some have also begun to deteriorate because of being held too long. Besides, they cannot be

graded so uniformly. In the same batch there are both good and poor hides. Because of this superiority of packer hides, tanners pay from two to five cents a pound more for them. If country hides were as good, tanners would gladly pay an equal price. This increased value of packer hides means that you get for your cattle from \$1 to \$3 or more per head, additional. Swift & Company does not deal in country hides at all, and has no interest in their purchase or sale. It is the hide dealers and tanners who notice the difference in quality, and pay accordingly. Swift & Company uses skill in taking off hides, not because it wants to see country hides bring lower prices—but because it is part of its policy to produce articles of the highest quality. This is only one way the packer has increased the value of your cattle. Many other by-products have been improved in a similar way. Swift & Company is constantly on the lookout for new ways to improve the value of its products, and hence to make your cattle worth more money to you. When Swift & Company says that its profit on beef averages 1/4 of a cent a pound, this includes the profit from the sale of hides.



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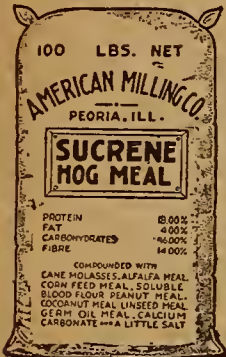
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Turning Cold into Gold

By H. H. Haynes

DID you ever hear your friends in town complain of their dairyman's delivering them sour milk? When you took your cream to the creamery, did the butter-maker ever tell you he couldn't use it? Does your wife have trouble keeping the food fresh and the butter from running all over the table during the hot summer months?

I'll wager all these things happen to a lot of us every summer, when really there is no necessity for it, and the answer is ice—just plain, old-fashioned, cold, hard ice. People who are always trying to get something for nothing seldom make out very well, but ice is something that comes pretty near being in their class. The labor required to put it up comes at a time when the regular farm work is slack, and the building needed to house it costs comparatively little, and lasts for a long time. The saving it effects in perishable products pays the cost of harvesting and storing many times over.

It has been estimated that natural ice can be harvested on farms where over 85 per cent of our milk and cream is produced. Think what it would mean if every one of those farms had the means to cool the milk and cream properly, and to keep it in that condition until it reached the creamery or whole-milk consumer. One creamery in a certain locality returned this last year over \$2,600 worth of milk and cream to farmers. In another case one milk plant received nearly 50,000 gallons of sour milk in one year.

The cost of labor and tools for the harvest is very small. By getting your neighbors interested, some sort of a community "ice bee" could be organized, help exchanged, and the same set of tools used for the entire neighborhood.

The size of the icehouse depends largely on what you have to cool, and how much there is of it. Where cream only is to be

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So if you have a minute, just sit down and let us know. Tell us the problems you are up against. Give us some idea of what you would like to see talked about in these pages. Because, as a matter of fact, you know, you are the editors of FARM AND FIRESIDE; we're not. All it's up to us to do is to find out what you want, then get the best writers to write it for you, and the best illustrators to illustrate it for you, and the best of everything to put it before you in a way that will be of some practical benefit to you.

The address is 381 Fourth Avenue, New York City, and we're here every day from 7 A. M. till Heaven knows when.
THE EDITOR.

cooled, one-half ton of ice per cow will be sufficient. For cooling milk, allow one and one-half tons for each cow. These quantities ought to work out so that you would have some left for household use. It is better, however, to plan on putting up some extra for the house, as it is a great deal better to have too much than too little. Figure, too, that there will be considerable shrinkage, and allow for that also.

Try and have the water supply as pure as possible. Clear the stream or pond of vegetable matter, otherwise it will be frozen in the ice.

Many farmers find it practical to maintain permanent ice ponds, and are very careful to protect them from every contaminating source, such as manure or barnyard drainage. Pure ice is formed only from pure water. Freezing does not destroy germs or other impurities which the water may contain.

The man who thinks in the winter about what he will do in the summer is a wise man, and this matter of ice is one good case in point.

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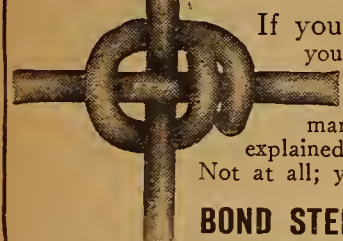
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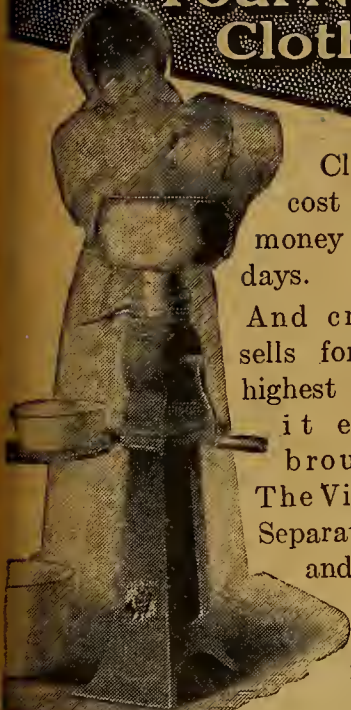
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Why Butter Won't Gather

By R. B. Rushing

DIFFICULTY is often experienced in making good butter in winter, and especially when you are milking only a few cows. Change of feed, temperature, and methods of handling milk and cream generally cause the trouble. There are frequent complaints that the butter is long in coming, or that it foams and swells and won't come at all. Scarcely a farmers' institute passes, where buttermaking is discussed, that troubles along this line are not brought up. A better understanding of the principles of cream-ripening and churning would help you to remedy these difficulties.

In the first place, we now know that cream is ripened and the flavor is produced by the development in the cream of certain bacteria. These bacteria enter either by chance or by the addition of a starter—that is, a small portion of cream already containing them and kept for the purpose from one churning to another. It is not practical, if you are a farmer with only a few cows, to bother with the commercial starter. Much of the trouble arises from the failure of these bacteria to develop properly. Either the development goes too far and the cream becomes too sour, or it is not carried far enough.

Temperature and the length of time the cream stands are the controlling factors in the process. Often the cream jar is kept in the kitchen while the churning is accumulating. This is a bad practice. The warmth of the room favors the development of the bacteria, and ripening begins with the first cream put in. Then subsequent additions are made with cream in different stages of ripening.

The much better way is to keep the

you know makes good butter, and get a pint or quart of ripened cream. Add this to your cream; stir it well and frequently in a warm temperature, and it ought to give no trouble when you churn.

If it swells too much and will not come, the cream is usually too cold. Be careful in adding hot water. The better plan is to try it with a thermometer before you begin and have it right at first, then you will not have this trouble.

Milk Without Grain

By C. W. Turner, Jr.

LAST fall several farmers were discussing the problem of how to feed their cows profitably with the present high prices of all mill feeds. One man suggested, in a joking way, that since we were having so many wheatless and meatless days, we could solve the feed problem by starting grainless days for the dairy cows. They were of the opinion that such a method would result in milkless days. But that is just what is happening in the herd of Mathew Michels, a dairyman of Fond du Lac County, Wisconsin. Every day is a grainless day for his cows.

"Too many dairymen," said Mr. Michels, "are still of the opinion that milk cannot be produced without the use of expensive feed. To raise all the feed needed for dairying is entirely practical where alfalfa can be grown. It has a feeding value equal to wheat bran. So, in feeding, I supply the protein in the form of alfalfa hay."

"After alfalfa hay, corn silage is the next most important feed. It should be remem-



Four advanced registry cows that have made big yearly profits for their owner

cream at low temperature until the desired amount is collected, and then remove to a warm place and add the starter. The cream will then soon begin to sour, then to thicken; and when it has reached the stage where it begins to separate from the whey it is ready to churn, providing the temperature is not too high.

If the cream has been kept cold while gathering, the temperature for ripening may be as high as 25 degrees. But be careful not to set it so near the heat as to overheat any part of the vessel, or you will have a case of scalded butter, and you know what that means. For security, every buttermaker should have a dairy thermometer; they cost only 25 or 50 cents.

After the cream is ripe, set it away to cool down to the proper temperature. In winter the best temperature for churning is between 60 and 65 degrees, but experience alone will not tell you the best temperature. The proper length of time for winter churning is thirty to forty minutes. Proceed with the churning until the granules of butter are about the size of wheat grains. Draw off the buttermilk and put in water four or five degrees warmer than the butter, drain off, and repeat two or three times. Press out the water, add the salt, and set away a short time; then work a second time, print and make into molds.

When the cream foams and becomes frothy it is usually because it has been kept too long and at too warm a temperature; or it may be that it needs a good starter. In that case go to a creamery or a neighbor who churns oftener, and who

bered that the variety of corn that gives the largest yield of shelled corn will give the best returns when fed as silage. Corn with big stalks and little grain does not make the silage wanted when feeding without concentrates. Be sure that the corn is fairly well matured before it goes into the silo."

The item of expense is not the only objection that Mr. Michels has to feeding of concentrates. He points out that many good cows are made poor or irregular breeders by the feeding of an excess of grain. Others, being overfed, contract various diseases.

It will be of interest to give his system of feeding: Alfalfa is fed the whole year. It is fed in the evening even when the cows are on pasture. Then silage is fed in the morning as long as it lasts. When it is gone the alfalfa is fed twice a day at the time of milking. During the winter months 25 pounds of silage is fed in two feeds a day with all the alfalfa hay they will eat, and more, because practically all the horse hay comes from the cows' mangers. A limit is put on the amount of silage, because it was found that when more than that amount of silage was fed, the cows were not able to eat enough hay to balance the ration.

"We have had very satisfactory returns," said Mr. Michels, in speaking of his method. "For the past six years we have carried and raised all our stock without grain or other concentrates. Our cows and heifers in milk have not averaged below \$100, and for the past year \$159.60 per head for the cream sold."

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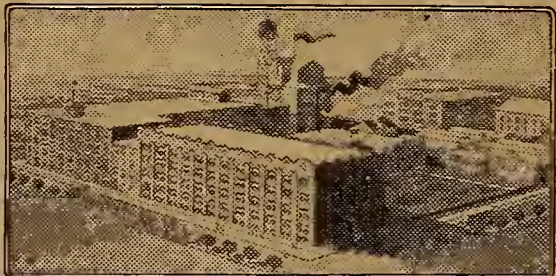
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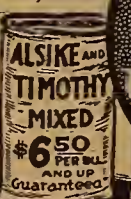
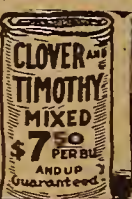
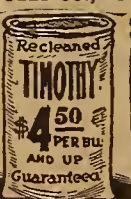
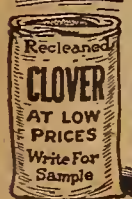
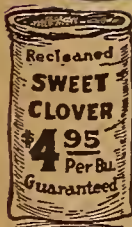
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SEEDS

The Truth About the Trenches

[CONTINUED FROM PAGE 7]

I landed on their bodies and then crawled around, close to the wall, until I reached a point where I could take a chance of getting away in the darkness. Of the nineteen men who tried to escape eleven were killed. The other eight succeeded in reaching Fort Tannan, but most of them were wounded. As soon as we got back to the continent an order came to support another division, and I went in again. I had fifteen days more in that sector, and during that time we lost seventy-five per cent of our forces.

In the thirty days I was there I never even had my shoes off. I never had enough to eat. I never was dry or warm. And the constant presence of death, the daily and hourly killing and wounding of our comrades were, of course, the most terrible part of it all.

However, the real significance of that experience was not in its discomfort or danger, but in the consciousness of duty attempted, of service performed, and of sacrifice gladly made.

You do not pity the child who has mastered his lesson, even through hard work and self-denial. You know that his achievement is worth the pains it has cost him. The men in the armies in France, children in the greater school of eternity, have learned perhaps the most marvelous lessons possible in this life. You may indeed pity them for the pain it has cost them; but, surely, your pride and satisfaction will transform and glorify that pity.

The Man With a Limp

[CONTINUED FROM PAGE 21]

"I found myself in the front rank of the crowd. The troops swung by, marching as those marched in the parade of the other day—loose-gaited, sometimes out of step, guns at all angles, arms swinging, lines waving and irregular. I saw a man smile in the ranks. I even saw one wave his hand at a woman who stood beside me—his mother, perhaps.

"I laughed to myself. 'They call these soldiers!' I thought, while I thrust out my chest and stalked along in the wake of the crowd. 'They should see what real soldiers are; they should come to Germany; they should—'

"And there my thought seemed to die, seemed to fade into nothing. I had, for the instant, returned to Germany. In the eye of my memory I saw Top-Sergeant Ritter as I had last seen him in the custom house at Berlioz; I saw him as he watched the sufferings of Krantz; I saw the poor Jew as he plunged through the window; and the Kaiser, standing in the rain at Hanau, wearing the Order of Merit, with oak leaves.

"I looked about me, there on Broadway. Everywhere were men who shambled along, or dragged their feet, or carried one shoulder higher than the other, or swung one arm and not the other, or swung both too far. There was every gait but a military one. Men walked as it pleased them to walk.

"I stood at the moment of my great decision. I had no time to pick or to choose. What I had to do I must do at once. With a violent effort of will I bent my stiff shoulders; with another I forced my right foot to drag, and relaxed the stiffness of my left hip. I moved my hat to the side of my head, and whistled. So I walked. "Then, indeed, was I free!"

Watch Your Seed This Spring

By Earl Rogers

NO OTHER truck or garden crop have I found to depend for its success more on first-class seed than onions. Good seed is of course the foundation of success with all seeded crops, but when one is growing onions almost exclusively for his money crop, good seed is a vital requirement.

In the first place, the onion seed must be grown the year before it is used. It is a gamble to use two-year-old seed. Some of it will grow, but we can't depend on getting a satisfactory stand. After two years the chances are slim of getting enough plants from even a double amount of seed to pay for the cultivation of the crop.

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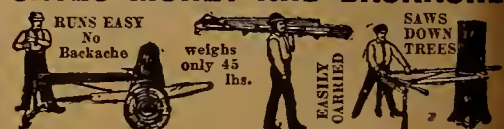
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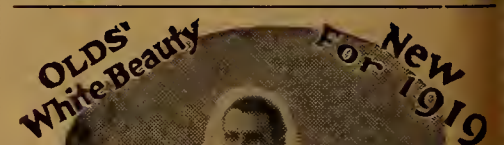
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L. L. OLDS SEED CO. Drawer P-20 MADISON, WIS.

This is why it is unsafe to buy seed from the grocer in small packets, as the seed is sometimes two or more years old before all the packets are sold out. City folks, who do not know a great deal about seed, often get fooled in this way, and then wonder why their gardens amount to so little.

I do not mean to say that all packet seeds are bad. Far from that. But I do say that they are not always fresh, and consequently lack vitality.

Whenever I can I like to buy seed direct from large growers of seed. There are reliable men who advertise what they have, and a grower who takes a trade journal can locate individual growers and get prices and samples of the product they have to offer. The specialist is particularly worth while in the onion seed line. I like to buy of a grower who makes just one variety his hobby. There is then less chance of getting mixed seed. He is also more apt to have developed that kind of stock just as much as he can, which will naturally be to the buyer's advantage.

So far I have been unable to see much difference in seed of different sizes. Another thing I look after closely is the testing of the seed. I try to have two or three tests before planting. I make—at least one myself, and have my experiment station make one for me. I get the seed early enough so I can do this with plenty of time to spare. If germination tests fall much below 95 per cent, I make a kick and get better seed; or, if that is not possible, I figure on planting enough more to make up for poor germination.

Just once I have asked my money back for seed that didn't show up well. The germination tests only averaged 65 per cent, so I sent to the seedsman the slip that the experiment station returned to me with the test marked, and the evidence was convincing enough to get my money returned.

It pays to find out something about the seedsman you expect to deal with before you take too much risk. I was able for a few years to get seed of a grower about 50 miles from home, and I have been on his farm several times while onion harvest was going on. I know that there is care used in every operation, and his seed always tests right. A few years ago he saved 1,200 bushels of onion bulbs for seed that he could have taken \$2.25 a bushel for, and he might have used inferior bulbs for the next year's seed crop; but he wasn't doing that kind of business. I like to do business with that kind of a grower.

Dandelions as a Sash Crop

By F. J. Harrington

THE dandelion, dreaded by many as a lawn pest, is becoming an important crop in some sections of the country, and is proving profitable when forced under glass or an early market. George T. Locke, a vegetable grower of New England, devotes a thousand sashes to dandelions each season.

Some growers start the dandelions in the open ground and transplant them to the frames. Mr. Locke gets best results by sowing the seed where the plants are to mature.

The seed is planted with a hand seeder in May. Usually two or three weeks elapse before the plants come up. Even when they are difficult to distinguish for several weeks longer. When dandelions are grown in the open ground it helps to sow a few lettuce or radish seeds with them as an aid to early cultivation. Mr. Locke sows the plants about six inches apart, and the seed is covered not over a quarter of an inch deep.

The secret of growing dandelions is in keeping the ground moist. Indeed, there are very few vegetables which need a greater amount of water, especially during the first few weeks. This is especially true when rather light, sandy soil is used for their culture.

When fall comes the frames are left open and the dandelions allowed to freeze solidly. About New Year's the sashes are put in place and the steam is turned on. In a few weeks the dandelions are ready for market. By the middle of February they often bring \$1 to \$2 a bushel, weighing about 13 pounds.

After the dandelion crop is off, a foot of manure is placed in the beds, top soil added, and onion seed planted, the onions being set out when settled spring weather comes. This frees the frames for the planting of dandelions again in May.



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A \$100 Prize Garden

By Mrs. Jennie Spokes

HOW did I win with my prize garden? I literally dug it out of rubbish heaps. The money prize of \$100 secured I invested in Liberty bonds. But just as important as the money prize was the supply of fresh staples and delicacies for our family of six, and our winter supply canned and stored in pits. These were well worth all the effort required.

This back-yard garden was several years in getting on a satisfactory footing. I made a start toward a garden in 1915. But the plot had been a dumping place for all kinds of refuse—brick, mortar, stone, coal ashes, and everything except good soil. By the end of the season we had grubbed and excavated a small plot for vegetables and flowers, down to real soil. In the location where asparagus was to be set I found a 6-inch top layer of cinders underlaid with 18 inches of stone.

The next spring a son arrived, and I tried to draft the services of Husband for gardening. He was willing, but failed miserably in getting anything to grow. One complication followed another that summer, the result being that but little was accomplished.

But last spring I took fresh courage, and with the aid of two small boys playing horses, and a wheel-hoe plow, I plowed the then renovated garden plot in different directions until it was thoroughly stirred eight or nine inches deep. Part of this plot was used as a chicken yard the year before.

In addition to the more common vegetables in my contest garden, such as bush and pole beans, peas, radish, lettuce, beets, cabbage, onions, tomatoes, cucumbers, and sugar corn, I had good success with eggplant, kohlrabi, okra, parsley, sweet peppers, and Swiss chard.

I raised my own plants in hotbeds and cold-frames, and sold many plants by advertising in our local paper. I was able to grow such a large variety by interplanting so that a new crop was always coming on to replace the plants that ripened or were harvested for canning and for table use.

I systematically plowed or hoed my garden entire each week—between the rows—and fed manure water and soapy water from the week's wash once a week, as needed, to keep all crops on the jump.

From early spring until October I bought neither potatoes nor substitutes, and made use of some garden products for each meal. Besides a large supply of canned and dried products, I trenched 250 bunches of celery and stored hotbeds of cold-frames with a good supply of roots—beets, carrots, etc.

How We Won Our Orchard

By Margaret M. Romine

IT TAKES a large measure of faith to see a future productive, profitable orchard when the little almost invisible apple trees are first planted. This was my feeling when just married after reaching our newly purchased little orchard farm home. I inwardly thought that I should never live to see results from those tiny, whip-like trees making so small a showing scattered over



One of our orchard children now twelve years old

22 acres of badly guttered, impoverished hill land in a rough section of Indiana.

But my husband had his vision of a money-making orchard business in what to me seemed a most discouraging beginning. We had to build a house at once, which added to our labor and expense required. Nevertheless, the first year a previously decided campaign of soil improve-

You Need This Book

in making up your garden planting list. From cover to cover, it teems with true-to-life pictures and descriptions of the choicest vegetables. It is a safe guide in selecting varieties either for home or market.

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Bushels of Berries

By W. P. Shuler

IT IS only when we talk of strawberries that "bushels of berries" can be counted on with approximate certainty from almost any limited farm or town kitchen garden. The cane berries have more enemies, and, ripening later, are more subject to injury from drought. But the strawberry is the favorite spring fruit of the masses.

Thousands of homes already have their strawberry "patch." Other thousands having the land are hesitating, and their tables have only a small fraction of the supply of strawberries that would be enjoyed could the berries be gathered fresh from their home plot.

The strawberry plant is not hard to suit in its requirements. Practically all it needs is well-drained, deeply prepared soil, made



This strawberry plant matured over a quart of berries, or at the rate of three hundred bushels an acre

fertile with plenty of stable manure and kept cultivated to subdue the weeds. Then, as early in the spring as the soil is fit to work, set strong, heavily rooted plants 12 to 15 inches apart in rows 30 to 36 inches apart, according to the variety to be grown. Spread out the roots naturally when planting, and have the crown just level with the surface when in place.

To make success doubly sure, have the furrows in which the plants are set well soaked with water, and finish the job of planting by a mulch of dry soil about the newly set plants. If necessary, water artificially for a few weeks, and keep the soil mellow and the runners cut off until mid-summer, not omitting the destruction of weeds throughout the summer.

In colder climates, a thick mulch of straw or corn fodder applied in November or December, after the ground freezes, will prevent frost injury and hold back too early blooming. When the mulch is finally raked back into the row centers, after the plants are safe from frost, the mulch again does valuable duty in preventing weed growth, and furnishes a clean bed on which the heavily fruiting stems may rest.

ment was begun. Our aim for the first two years was to keep the soil covered with cowpeas in summer and rye in fall and winter, which was accomplished by using acid phosphate to give the initial start to these crops.

Even though large areas of that 22-acre hillside orchard were badly washed, the acid phosphate helped to secure a vigorous growth of cowpeas, these in turn lent their fertilizing aid to the rye and young trees alike, and within the space of three years, by this treatment, we were able to produce plenty of clover and other feed for stock; also potatoes, grain and truck crops were thriving, and the trees were advancing by leaps and bounds toward their bearing stage.

The orchard was set in 1907, and for several years the trees have been giving us an increasing crop of apples. Last year many of our trees yielded 10 to 12 bushels each. Our apple crop has not yet put us in the income-tax class, but our gross receipts last year were well up in four figures, and my ideas of the possibilities of a young apple orchard have agreeably changed.

I feel that the success with our orchard must be in large part credited to acid phosphate, which, in conjunction with good culture, plenty of persevering hard work, and faith in our ideal, has placed our little orchard farm on a solid foundation with which to realize success during the coming years.



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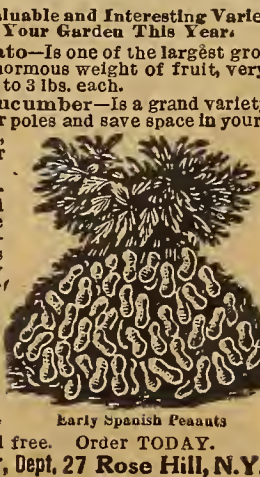
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And allowed to points beyond, I ship from Buffalo, Kansas City, Minneapolis or Racine to insure quickest delivery. You cannot

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And you are perfectly safe in ordering direct from this advertisement. With this Guaranteed Hatching Outfit and my complete

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"Oh! It's easy when you use a Belle City."



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A high grade hatcher direct from factory to user at bed-rock price. Made by experts of 26 years experience. Has a solid wood case, triple walls, copper hot water tank, self regulator, nursery, large oil tank one filling to hatch, safety lamp. All latest improvements. Safe, simple, durable and a sure hatcher. All set up ready for use. Fully guaranteed. Largest factory in northwest. Write for free book and catalog.

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Value Ever Offered

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30 DAYS' TRIAL Money Back If Not Satisfied is the greatest incubator offer of the season. You can use the machine for 30 days and if not satisfactory, we will refund your money and pay return freight charges. Machine come to you complete, ready to use, and accompanied by a

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150-EGG Ironclad Incubator
Don't class this big galvanized iron covered, dependable hatcher with cheaply constructed machines. Ironclads are not covered with cheap, thin metal and painted like some do to cover up poor quality of material. Ironclads are shipped in the natural color—you can see exactly what you are getting. Don't buy any incubator until you know what it is made of. Note these Ironclad specifications: Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering. Large egg tray, extra deep chick nursery, hot water top heat, COPPER tanks and boiler, self-regulator, Tycos Thermometer, glass in door, and many other special advantages fully explained in free catalog. Write for it TODAY or order direct from this advertisement.

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Galvanized Iron Asbestos Redwood Insulated Board

MADE OF CALIFORNIA REDWOOD

150 Chick Brooder

Is Your Poultry Paying You Enough?

[CONTINUED FROM PAGE 6]

fell off right at a time when it should have been heaviest. The poor food was the direct cause, and it taught me a good lesson. Never since that time have I used anything but wholesome feed.

The matter of equipment is largely a matter of personal choice and how much money you care to put into it. The only thing to be sure of is that the buildings are well built and ventilated, free from drafts, and that the size is in keeping with the size of your flock. I believe the reason there are so few really large flocks in the country is due to lack of equipment. Many breeders fail to realize the necessity of their housing space keeping pace with their flocks. Large flocks need plenty of perch and hopper space. Crowded birds will never bring in the maximum returns of which they are capable.

It happened in my case that there was a large basement barn which could be easily turned into quarters for the chickens. It is below the ground on two sides only, thus giving plenty of ventilation and warmth at the same time. My grain is kept in bins overhead, and when feeding I simply open a slide in a feed spout, while gravity does the rest. My feed hoppers are placed in several convenient alcoves in the side wall, and the nest boxes extend along two sides, with the perch space across one entire end. The perches are raised high enough to make cleaning under them no labor at all, and two large doors enable me to drive in with a team and wagon. I have found, too, that the fowls go out to exercise much more readily when they can use these large doors, so I leave them open whenever the weather permits.

In addition to the hen barn, as I call it, I have a long, fully equipped chicken house. This is divided into several pens, each having its separate perches, nest boxes, feed hoppers, and water troughs. Down the center of this building runs a track which carries my feed cars, so that when I feed I simply go from one room to another, pushing the car as I go, distributing feed on the way, and gathering eggs on the way back.

I HAVE tried, in every way I can, to eliminate useless steps and labor. I have the work down to such a fine point that two hours a day is all I need to feed and gather the eggs from 2,000 birds. You might think I am not giving everything the attention it requires, but I assure you I am. The returns I get are proof of that. It is not all play, however. There is feed to be mixed once a week or oftener, old straw and manure to clean out and replace, an occasional spraying with some disinfectant, eggs to pack and ship, and many other little things that are incidental to the business. It is all work, but work that brings returns in proportion to effort many times over.

The marketing of poultry products demands careful attention. On it often depends your profit or loss. I have investigated the advantages of both the small and large markets, and have come to the conclusion that the large market is the best in the long run. I ship my eggs to a big firm some 400 miles distant, but the premium I receive for my strictly fresh product more than repays me for the increase in transportation charges. It is true, also, that the large markets are always higher than the local ones, on account of the never-ending demand. Some time I may try parcel-post marketing. I have often considered it, but, besides taking considerable time to build up a trade of that nature, it also means more help to handle the details which such a marketing proposition incurs.

I ship my eggs every three days in the winter months, and would ship oftener were it possible to get them packed. The heat of the summer demands more frequent shipments if the eggs are to be classed as strictly fresh when they reach the market. I have a special packing building, and it is a very busy place.

The point of it all is that I am now cashing in on a previously gathered knowledge of the game—a knowledge which it is possible for anyone to get with a little effort, and which will repay him just as large returns as it is doing for me. I know of no rules I can set down for anyone to follow to become a successful poultryman. They are made, not born, as many persons think. Raising poultry is not a business where intuition tells you what to do next. You have to know what to do, and use good judgment in doing it.

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eggs. Perfect regulation of heat, ventilation and moisture, roomy chick nursery, visible egg chamber easily accessible, triple wall, water jacketed heat flume, sloping egg tray keeps small ends of eggs always downward—enables chicks to develop more perfectly. Economical to operate—\$6.95 ate. Sowell-built it lasts a life-time. Price only \$6.95. Order from this advertisement. Send check, money or express order, we ship at once, f. o. b. Quincy, Ill. For shipment by parcel post include postage for 21 lbs. weight. If you are not entire-ly SATISFIED after write us and we will refund all money you have paid. We are responsible. In business in Chicago 46 years. Ask your banker. You also need our splendid "Liberty Hatcher" 70 chick capacity, all heated, self regulating, weighs 14 lb. \$4.50 f. o. b. Quincy, Ill. For larger incubators write today for special catalog. B. F. Gump Co., 443 S. Clinton St., Chicago, Ill.

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Tells all about the care and management of poultry for pleasure or profit. Monthly. 50¢ a year; 6 mos. 25¢; 3 years \$1.00. Poultry Advocate, Dept. A, SYRACUSE, N. Y.

Money in Poultry and Squabs Small Investment, Big profits. Our stock pays best. Thousands of prizes at big shows, best layers, lowest prices, all varieties. Big Free Book tells all about it. Write today. Crescent Poultry Farm, Box 31, Des Moines, Ia.

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A \$100.00 PRIZE THESE GIRLS raised 1,753 chicks in 1918, winning a \$100 War Prize. They used our GEM HATCHERIES and BROODERS, costing only 40¢ each. Over 240,000 now in use. Catalog sent FREE. GRUNDY POULTRY FARMS, Morrisville, Illinois.

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25 Leading Varieties—Safe delivery guaranteed. Postpaid. One of the largest and best equipped hatcheries in U. S. Catalog FREE. Miller Poultry Farm, Box 555, Lancaster, Mo.

Tells Why Chicks Die

E. J. Reefer, the poultry expert, 4032 Poultry Bldg., Kansas City, Mo., is giving away free his valuable chick book entitled "White Diarrhea and How to Cure It." The book contains scientific facts on white diarrhea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98% of every hatch. It is absolutely free. Every poultry raiser should have one. Write Mr. Reefer today for your copy.

POULTRY MILLER'S GUIDE

tells all about raising chickens, care, feeding, etc. Contains beautiful colored pictures of best FREE paying varieties and best layers, sent absolutely. Eggs and Poultry for hatching at special low prices. J. W. MILLER CO., Box 27, Rockford, Illinois.

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62 BREEDS

Most Profitable Pure-Bred Chickens, Geese, Ducks, Turkeys. Hardy fowls, eggs, and incubators at lowest prices. America's Pioneer Poultry Farm. Write for valuable Poultry Book FREE. F. A. NEUBERT, Box 314, Mankato, Minn.

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10 Year Guarantee Don't take chances. Find out what an incubator is made of before buying. Catalog and sample of material sent free. We will send you these two machines, freight prepaid East of Rockies on 30 DAYS' free trial.

Both Machines \$14⁷⁵ Freight Paid Only

Wisconsin are made of genuine California Redwood. Incubators have double walls, air space between, double glass doors, copper tanks, self-regulating. Shipped complete with thermometers, egg tester, lamps, etc., ready to run. Send today for our new 1919 catalog, free and postpaid. Large Size 180 EGG INCUBATOR AND BROODER, BOTH \$17.25. WISCONSIN INCUBATOR CO. Box 48 Racine, Wis. MONEY BACK IF NOT SATISFIED

First Aid to Cripples

By S. O. Bryant

EVERY once in a while we have an incubator hatch come off in which there are several chicks with their toes crooked or turned under. By catching them in time we find it can be very easily cured.

We take a piece of cardboard cut to the shape of a chicken's foot, with a small piece to go up the leg. We rub the chick's foot with vaseline, and wrap each toe and the leg in cotton wool, then sew the toes straight out on to the cardboard with some soft yarn, taking care not to prick the toes, and tie the leg piece round the leg. This keeps it firm. We let the splint remain on for forty-eight to sixty hours, and when it is taken off the toes are usually found to be quite straight.

We find it best to put the splint on as soon as possible after the chicken is hatched, as it keeps quieter then and its toes are more supple. However, we doctored one that was three days old, and now we cannot tell you which was the crippled chick among the flock.

The Why of High Eggs

By Mrs. E. M. Anderson

WHEN the boycott campaign to reduce egg prices was staged in New York City and elsewhere by an organization of housewives, the movement was a jump in the dark. Few, if any, of those boycotters understood the comparative food value of eggs or had even a remote idea of the expense and skill required to supply fancy fresh eggs in midwinter. When the same housewives want fresh lettuce, radishes, tomatoes, or rhubarb out of season, they expect to pay four- or five- and, at times, ten-fold higher prices than the normal. Nevertheless the problem of growing vegetables out of season is much simpler and the comparative expense is no greater than producing fresh eggs out of season.

Furthermore, if considered from the angle of food values, fresh eggs bought at 75 cents a dozen contain incomparably more food nutrients than lettuce and tomatoes sold at the usual out-of-season prices. The same argument can be brought against the excess prices paid for fruits brought from the tropics—strawberries, grapefruit, grapes, etc.—out of season.

It is high time consumers of guaranteed fancy fresh eggs should learn once for all that eggs laid during the period from October 1st to February 1st should sell for at least double the price of the average selling price of eggs for the remainder of the year.

How I Hatch Hard-Working Hens

By M. M. Clark

MY PURE-BRED strain of Barred Rocks had no remarkable ancestry, but for years my aim has been to develop and maintain a first-class laying flock having exceptional vigor and early maturity. I have never allowed color, barring, or other fancy points to stand in the way of selecting my breeding stock for utility purposes. Nevertheless, my stock has not deteriorated in respect to color or appearance to any injurious extent. They are still a fairly good average in all the standard requirements except size. They are just a little below standard in weight.

I have not practiced trap-nesting as a means of selecting the birds for my breeding pen, but I have learned to know by the actions and behavior of my birds which are the best producing individuals and which at the same time have the exceptional vigor requirement. I no longer have any anxiety as to what the laying quality of my young stock will be. I know I can always depend on regular and steady egg production from my pullets throughout the winter and for about ten or eleven months out of the year if I do my part and get the chicks hatched in time to mature before cold weather arrives. I have proved to my own satisfaction that no Leghorn, Minorca, or other so-called egg breed can outlay my Barred Rock strain in a test of given number of years. I backed up my judgment in this matter by entering pens of pullets in the Connecticut Laying Contest several years, and found that my Barred Rocks could hold up their egg-laying job with anything wearing feathers.

160 Hens 1500 Eggs



As America's foremost poultry expert I predict that eggs are going to retail for a dollar a dozen this winter. Right now the retail price is from 50c to 75c per dozen in some of the large cities. At a dollar a dozen poultry raisers are going to make tremendous egg profits. You, too, can make sure of a big egg yield by feeding your hens a few cents' worth of "More Eggs" tonic.

This product has been tried, tested and proven. It is acknowledged the best and most successful egg producer on the market today. Every day that you don't use it means that you are losing money. Don't delay. Start with a few cents' worth of "More Eggs" tonic now.

Got 117 Eggs Instead of 3

That's the experience of one poultry raiser who wrote me. A. P. Woodard of St. Cloud, Fla., writes: "I get from 40 to 50 eggs a day now. Before using 'More Eggs' I was getting only 8 or 9 eggs a day." Here are the experiences of a few others of the hundreds who write me:

"160 Hens—125 Dozen Eggs"

E. J. Reefer: Waverly, Mo. I have fed two boxes of More Eggs Tonic to my hens and I think my hens have broken the record for eggs. I have 160 White Leghorns and from March 25 to April 15 I sold 125 dozen eggs. MRS. H. M. PATTON.

"15 Hens—310 Eggs"

E. J. Reefer: Turner Falls, Mass. I used your More Eggs Tonic and from December 1 to February 1, from 15 hens, I got 310 eggs. Your remedies are just what you claim them to be. MRS. C. R. STOUTON.

"Laid all Winter"

Dear Mr. Reefer: Lackawanna, N. Y. I gave the tablets to my hens and in three weeks they began laying and laid all winter. I never saw anything like them in the world. Yours truly, MRS. ALBERT SMITH, Penna. R. R. Ore Docks.

"37 Eggs a Day"

E. J. Reefer: Elwood, Indiana. That More Eggs Tonic is simply grand. When I started using it they did not lay at all, now I get 37 eggs a day. Yours truly, EDGAR E. J. LINNIGER.

"Increase from 2 to 45 Eggs a Day"

Reefer's Hatchery: Derby, Iowa. Since I began the use of your More Eggs Tonic 2 weeks ago I am getting 45 eggs a day, and before I was only getting 2 or 3 a day. Yours truly, DORA PHILLIPS.

"Doubles Egg Production"

E. J. Reefer: Paradise, Texas. I have been using More Eggs Tonic 3 or 4 weeks and must say it is fine. My egg production has been doubled. J. C. KOENINGER.

"48 Dozen in One Week"

Dear Mr. Reefer: Woodbury, Tenn. I can't express how much I have been benefited by answering your ads. I've got more eggs than I ever did. I sold 42 1/2 dozen eggs last week, set 4 dozen, ate some and had 11 1/2 dozen left. From your friend, MRS. LENA McBRON.

"Increase From 8 to 36 Eggs a Day"

E. J. Reefer: Shady Bend, Kansas. I am well pleased with your More Eggs Tonic. I was only getting 8 or 9 eggs, now I am getting 3 dozen a day. Yours truly, WM. SCHMIDT.

More Eggs Makes Layers Out of Loafers

This is a concentrated tonic, not a food. It consists of every element that goes toward the making of more eggs. A perfect regulator, aids digestion, stimulates egg production and builds firm bones and strong muscles. The foremost authorities in America and poultry raisers from every state endorse Reefer's "More Eggs" Tonic.

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Here is the facsimile of the guarantee of a million dollar bank that "More Eggs" will produce results. This million dollar bank guarantees to refund your money if you are not satisfied. You run no risk. So don't delay. Every day you wait you are losing money.

Order Today

Send a dollar today for a full-sized package of "More Eggs" tonic; or better yet send \$2.25 at extra special

discount, and get three packages. Three packages is a full season's supply. Don't put it off. Order now and start your hens making money for you. Remember, you run no risk. A Million Dollar Bank will refund instantly if you are not entirely satisfied. If you don't order your More Eggs now at least mark on the coupon for Mr. Reefer to send you, ABSOLUTELY FREE, his valuable poultry book that tells the experience of a man who himself has made a fortune and is helping others to make money out of the poultry business. Act NOW. Don't wait. Pin a dollar bill to the coupon. Or send \$2.25 which will guarantee your winter's egg supply. Send for this bank-guaranteed egg producer NOW. Today! It has helped thousands of others and will help you, too.

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TO WHOM IT MAY CONCERN:

I hereby guarantee that Mr. Reefer will carry out his agreement *** and this bank further agrees to return to the customer the total amount of his remittance, if Mr. Reefer fails to do as he agrees.

Very truly yours, *W. H. Huley* President.

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Enclosed find \$..... Send at special discount price, with all charges prepaid, packages of More Eggs Tonic. Send this with an absolute Bank Guarantee that you will refund all my money if this tonic is not satisfactory to me, in every way.

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IMPORTANT: If you don't want to try this Bank Guaranteed tonic at least mail the coupon for my Free valuable poultry books FREE.

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and Almanac for 1919 has many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickendom. You need it. Only 15c. C. C. SHOEMAKER Box 962 Freeport, Ill.

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Porter Soft-Heat Tubeless Incubator combines hot air and water. Automatic control of heat, moisture and ventilation. Center heat plan, round nest, eggs turn semi-automatically without removing tray, saves time and money. Simple, safe, sure.

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DAY-OLD CHICKS of quality guaranteed to 1,500 miles. Eggs for Hatching at low prices. Bar Rocks, S. C. W. Leghorns, S. C. and R. C. Reds, W. Wyandottes, Buff and W. Orpingtons. Chick-let catalog free. GOSHEN POULTRY FARMS R-23 Goshen, Indiana

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Help feed the world and make more money for yourself with time-tested

SUCCESSFUL Incubators and Brooders

26 years' experience. Cabinet-made—scientifically ventilated. Hot water heating plant. Write for Free Catalog—ask about poultry and eggs, and "Successful" Grain Sprouters. Famous booklet, "Proper Care and Feeding of Chicks, Ducks and Turkeys," 10 cents.

J. S. Gilcrest, President and General Manager QES MOINES INCUBATOR CO., 61 Second St., Des Moines, Ia.

Free Catalog in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today. Electric Wheel Co. 13 Elm St., Quincy, Ill.

TEETH and TONIC for POULTRY

It will pay you to try PEARL GRIT

You never can lose by following the example of successful poultry raisers. Hundreds now depend on the "Double Purpose" poultry ration—PEARL GRIT Keeps Poultry Healthy Helps Hens Lay More Eggs

An essential aid to perfect digestion of food. Contains all the valuable elements necessary in the making of white, hard shells and meaty eggs. Prevents clogging and fermentation. Ask your dealer or send 10c for pound package postpaid. Booklet of poultry remedies free.

THE OHIO MARBLE CO. 106 Cleveland St. Piqua, Ohio



Utility

SOME people use O-Cedar Polish on floors and for treating polish mops.

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O-Cedar Polish is the utility polish. Wherever a clean, bright lustre is desired on painted, varnished, finished or stained surfaces use O-Cedar.

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RO-SAN Indoor Closet

The original chemical closet. More comfortable, healthful, convenient. Takes the place of all outdoor toilets, where germs breed. Be ready for the long, cold winter. Have a warm, sanitary, comfortable, odorless toilet right in the house anywhere you want it. Don't go out in the cold. A boon to invalids.

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ROUGH ON RATS
DON'T DIE IN THE HOUSE

Who Can Win With Chickens?

By Annetta Adams

A COMMON question from city dwellers is, "Can I expect to succeed with chickens if I invest in a poultry farm and undertake to carry on the business myself?" Let me furnish one answer to this question which is being demonstrated under my personal observation.

A thriving mercantile concern in a New Jersey town for years operated under the firm name of Hunt Brothers. Finally the Hunts had a desire to retire and own a home and farm in the country. These men, always active in their business, knew they must have a practical business activity to be contented in their new home, so they decided to make utility poultry-keeping, conducted on modern, progressive lines, their main farm interest. They therefore began the development of an egg business on their 32-acre farm within easy marketing distance of New York and Philadelphia.

A trustworthy man was employed, and a start was made with 200 well-bred utility White Leghorns and 14 cock birds. The Hunt Brothers and farm foreman alike were inexperienced with chickens except theoretical knowledge, but by beginning carefully and getting advice from practical and successful poultrymen they avoided most of the rocks that all too often wreck beginners, and they have gradually increased their operations to 1,600 layers and the necessary breeding stock and young stock to keep their quota of layers renewed. Their plant has been developed to give practical results by use of labor-saving devices of various kinds, including incubating cellar, brooder and colony houses, well-adapted laying and breeding houses supplied with running water, manure and litter carriers, etc. The aim throughout has been to provide the best of ventilation and sanitation to prevent disease from getting a start.

In feeding all their poultry stock they have kept close to the recommendations of poultry experts, and make use of a generous supply of fresh alfalfa and clover to lessen the feed bills as much as economy of production will allow.

While this poultry business was based on the idea of making it a profit-making occupation, the goal has also been to prove that a large-scale poultry plant can be developed into a beautiful country place by means of attractive buildings, fences, orchards, shade trees, shrubbery, flowers, and equipment generally. All who see their place admit that the hopes of these retired merchants are rapidly being realized, even though but a few years have elapsed. Their country home and farm is becoming known as a delightful place to see, while it is steadily paying a good dividend on the capital invested in addition to operating expenses. The eggs go to supply large city hotels, and bring a fancy price the season through.

To better carry out the idea of beautifying their place they have steadily worked in their breeding to produce a combination of utility and beauty in their Leghorns, and to this end keep working toward a type of Leghorn stock that will produce heavily of eggs and be attractive in feathering, bead-furnishings, and conformation. This part of their task is proving no easy one, since the heavy-laying quality steadily reacts against beauty of conformation, and must be constantly offset by the skill and knowledge of the breeder.

A Boost for the Lowly Hen

By B. F. W. Thorpe

WITHOUT question, America's poultry industry has been underestimated, and of late its interests have been side-tracked as a result of special war influences being directed toward stimulation of other and so-called "red meat" production. True, government, agricultural, and food administration officials have spoken for the encouragement of poultry production. But there was a lack of systematic organized work in behalf of our poultry interests.

The result has been a nation-wide decrease in our poultry population following the heavy advance in cost of poultry feeds and essential poultry equipment without a corresponding increase in revenue from our flocks.

But now poultrymen can take courage,

for the poultry star is in the ascendant. The very ablest men interested in this industry have been busily planning and working for the past year to complete and launch an organization that will coordinate the full strength of the poultry industry for its future betterment.

This new organization has been given the name of the "National War Emergency Poultry Association," and its officials and membership comprise the active strength of practically all the state and local poultry and allied organizations of the entire country.

Already those who have been given authority officially to conduct the work of this federation are making a determined effort to insure our poultry interests having a square deal in the purchase of supplies and the distribution and sale of poultry products.

Never before was the American poultry industry in position to put its interests into the sunlight. Producers and consumers of poultry and its products can alike take heart. For without the industry becoming stabilized, there would continue to be a loss to producers and, in consequence, shortage of supply and increased cost of poultry to the consumer.

Even more calamitous, with underfed nations to sustain, would be the increased home consumption of pork and beef following continued shortage of poultry and poultry products. A billion-dollar poultry industry must not be allowed to dwindle.

"Show You" Poultry Shows

By B. F. W. Thorpe

VISITORS to the rank and file of poultry shows see merely a fashionable dress parade of glossy, well-groomed poultry feathers, scrubbed legs, polished claws and beaks, tails carried at the fashionable artificial slant, combs showing the regulation number of points, etc. Seldom is anything to be seen or known of the actual conformation and body development of the heavily feathered birds themselves, except by poultry experts who have learned to look through feathers and frills to the real organism itself. It is the exception to find more than one generation of a strain or family on exhibition at one show. When such is the case it is seldom that the onlookers are made aware of the fact.

With other stock exhibited, much of the real educational value results from the comparisons that can be made between sires, dams, and their get, including several generations of progeny or related blood lines. Just here is an opportunity to make our poultry shows of real and helpful value to the beginner or novice who is contracting "chicken fever." Here should be exhibited family groups, including three or more generations, so that interested poultrymen and the public can know just what particular families are like when kept several years for breeding purposes, and can see how they reproduce their types. Not alone should the so-called fancier's stock be the main show; utility families and strains should be equally prominent with egg types of all prominent breeds and varieties, showing year-through layers depicting the various signs of heavy egg production; also exhibits of dressed specimens of heavy layers and "boarders" for comparison; and fryers, broilers, and roasters, including capons, ready for the grid and oven. Molting birds of the different breeds should have a prominent place in autumn shows, since the feather-bereft hen or cock discloses actual body conformation in life action which is afforded at no other time.

Likewise, eggs of the hens exhibited should have a prominent place. Another and highly important class should be composed of hens that have won distinction in officially conducted egg-laying contests, accompanied by charts showing accomplishment of such honored performers. Concisely stated, poultry shows should no longer be merely animated exhibits of feather bird-art models. If the fancier's stock can furnish official proof of generations of utility qualities, well and good; but, in any case, give utility an undeniable place in every poultry show.

What Mrs. Wilson Served for Luncheon

Also including recipes for many other tasty inexpensive dishes evolved by official Washington housewives to save food

By Ruth Eleanor Jones

MOST of the things printed about Washington society women are apt to give the impression that they devote their energies to clothes and receptions and having a good time. Nothing could be further from the truth.

The fact is that these good women struggle with the same problems you struggle with in your home town or on the farm. The cost of living hits them just as it hits you, and perhaps some of the conservation dishes they have learned to cook may interest you because, although the armistice is signed, food conservation, Mr. Hoover tells us, must go on more intensively than before, if famine is not to grip the world.

From the "First Lady in the Land" down, the women prominent in official life in the Capital devote time, thought, energy, and intelligence to the solution of the problem of living; and they are more than willing to pass their experiences along.

For instance, Mrs. Robert Lansing, wife of the Secretary of State, became convinced of the value of dried foods, the further use of which is being warmly advocated by the Department of Agriculture. To prove how appetizingly they may be prepared and cooked, she gave a "dried luncheon" not long ago, and invited a number of the cabinet women, with such other guests as Mrs. Champ Clark, Mrs. Atlee Pomerene, and Mrs. Hugh L. Scott, to a six-course meal composed entirely of dried foods. The menu included bouillon made of dried vegetables, dried chicken, which was "brought back" by being soaked in water and then fried in vegetable oil, several sorts of dried vegetables, also brought back by soaking, salad, and a delicious dessert flavored with dried mint leaves.

The luncheon, which was served in the lovely old garden back of Mrs. Lansing's home, where she gives delightful dinners during the summer months, was voted a great success. Many of the viands they sampled are now in regular use in the homes of some of the guests who were present.

In the days when she was Mrs. Norman Galt, the President's wife used to do her own marketing, and her little house was run with clock-work precision. Although she has now resigned the actual details of providing into the hands of the old-established White House housekeeper, she still continues to supervise domestic arrangements very closely. Home-making is her vocation in life, and she considers house-keeping an essential part of home-making.

The White House sets the pace in food conservation, and Mrs. Wilson sees personally that the ménage lives up to the pledge on the membership card of the Food Administration conspicuously displayed in the front window. She sees that under the White House roof there is none of the wilful squandering of foodstuffs which in the days before the war was one of our crying national sins. She keeps the drawing-rooms filled with fresh flowers, and personally sees that the household machinery is kept running smoothly.

The President and Mrs. Wilson have always had very simple personal tastes;

and nowadays when they give a dinner the menu is, in effect, "passed by the Food Administration" and subscribes in spirit, if not in letter, to the "three-course dinner" advocated by that institution. For example, when the French War Mission, with M. René Viviani and Marshal Joffre at its head, was in Washington, the guests of the nation dined at the White House and were given a thin soup, a filet of beef, with several spring vegetables, a salad, an ice, and a demi-tasse, with cigars and cigarettes after the ladies had retired to the drawing-room. There was no mention of wine.

The several other missions of our allies, British, Italian, Russian, Belgian, Japanese, and the rest, were similarly entertained at a frugal repast. At informal luncheons, which are the accepted form of entertainment for the more or less official missions that come to Washington, the menu is quite as simple.

Save for purely official dinners in honor of visiting notables from overseas, entertaining has been taboo at the White House since the United States entered the war and since the armistice, the only exception being Mrs. Wilson's informal at homes for thirty or forty guests, which are so pleasant a feature of the winter season. Mrs. Wilson is a perfect hostess, with a winning smile and always ready with some remark to make

each guest feel personally welcome. The tea table usually is laid in the great south window of the Red Room, or occasionally before a snapping wood fire. Miss Edith Benham, Mrs. Wilson's secretary, presides, or possibly Miss Margaret Wilson or Miss Helen Woodrow Bones.

With one's tea—and White House tea is proverbially delicious, always piping hot and freshly brewed—one is served dainty little sandwiches, usually rye-bread sandwiches nowadays, and possibly a piece of home-made cake. Only granulated sugar is used, for lump sugar is considered wasteful. The silver and tea service are handsome, and lovely old-fashioned spoons, very plain and marked in script, "The President's House," are always used. In fact, almost all of the flat silver used in the White House is so marked.

There has just been delivered, by the way, the first set of White House china designed by American artists, made from American clays at an American pottery, burned in American kilns, and decorated by American workmen. It is the custom for each Mistress of the White House to have the privilege of ordering a service of china, which on her departure is added to the important collection of table and glassware which is included in the appointment of the President's House.

Months of time were consumed in the preparation of designs for the present service, a state dining set which numbers seventeen hundred pieces, and great care was taken in its manufacture. The result is a service of great simplicity and richness.

Each piece is in two tints, cream-white in the center, with a deep border of ivory. The decorations are in rolled gold, a narrow border into which the Stars and Stripes have been worked, and the President's seal in gold appears on each piece. The service plates have a deep blue border with a design in gold.

The service has been dubbed the "President Wilson design," and specimen pieces of the different articles included in the set have been placed with the notable collection of the White House heirlooms, specimens of the china and glassware used by each of the Presidents of the United States, which is housed in a room on the ground floor of the White House. Mrs. Theodore Roosevelt started the collection, each succeeding White House chatelaine has added to it, and there have been many gifts of priceless things, mementoes of the administrations of Presidents long dead.

In spite of the fact that its present chatelaine is an accomplished housekeeper, things don't always run smoothly at the White House in these difficult days. Indeed, Mrs. Wilson laughingly tells sometimes of how the members of the Christmas house party at the Executive Mansion last winter shivered and shook and went about in fur coats, and how an aunt of the Wilson girls was actually driven to tramping up a very important reason for going home several days before she had intended. The apartments occupied by the family were comfortable enough, but the bitter weather, the necessity for using coal sparingly, and the rather inadequate heating plant in the White House, combined to make the wing in which the guest chambers are situated almost unfit for habitation.

But this is a digression from the passing on of some hints which have been helpful to the women of official life in their three-fold battle to rout the full garbage pail, to

"Woodrow's Favorite"

PRESIDENTS have certain prejudices about things to eat, just like other folks, you know. And we find, tucked cunningly away near the end of Miss Jones's very interesting story about the dishes official Washington wives give their husbands to eat, the detailed recipe for Mr. Wilson's favorite dessert. And what do you think it is? A charlotte russe. It's some dish too. If you don't believe it, look at the recipe.

THE EDITOR.

make them tender and dressed up with a savory sauce. She frequently serves cheese as a substitute for meat at luncheon, and her recipe book contains directions for making numerous appetizing delicacies of cheese. Here's one favorite, a cheese soufflé:

One cup of milk heated in a double boiler, two tablespoons of flour, two tablespoons of butter, one cup of grated cheese, three eggs. Cream butter and flour, stir in hot milk, add grated cheese and yolks of eggs, and set aside to cool. When cool, add whites of eggs beaten stiff, and bake in a medium oven for fifteen minutes. Serve immediately.

The Department of Agriculture has been experimenting in the making of cheeses, the increased use of which it highly recommends, and has developed a Camembert cheese and a Roquefort cheese which compare favorably with the imported varieties. We used to get before the war. The directions for these may be had from the department for the asking.

Mrs. Newton D. Baker, wife of the Secretary of War, makes a cheese soufflé, or a cheese fondue, as she prefers to call it, which she considers very fine. She uses bread crumbs, contending that they prevent the soufflé from falling. The recipe calls for one cup of bread crumbs, very fine, one cup of York State cheese, crumbled, three eggs, beaten separately, one cup of milk, salt, pepper, and cayenne.

Put a layer of bread crumbs in a buttered or oiled baking dish, beat the eggs and milk together, add the cheese, season, and pour the mixture into the baking dish. Add another layer of crumbs, and bake for twenty minutes.

One of Mrs. Baker's most highly prized bits of household lore concerns the cooking of cabbage. The first thing is to "catch your cabbage young." Cut it in quarters and put it into water that is boiling very hard. Do not cover, and boil for just eighteen minutes. Season with salt, pepper, and melted butter, or serve with cream sauce if desired. If prepared in this fashion the cabbage will be remarkably tender and delicate, and, best of all, there will be no odor from the cooking. Mrs. Baker maintains that all vegetables are better if boiled without a cover, as the steam confined beneath the lid tends to spoil the flavor.

The use of fish is heartily advocated by the Food Administration, and it certainly tends to add variety to the diet. Moreover, although the price has advanced rapidly, it is still considerably cheaper than meat. Here's a recipe for fish soufflé which Mrs. Baker uses frequently on her own table:

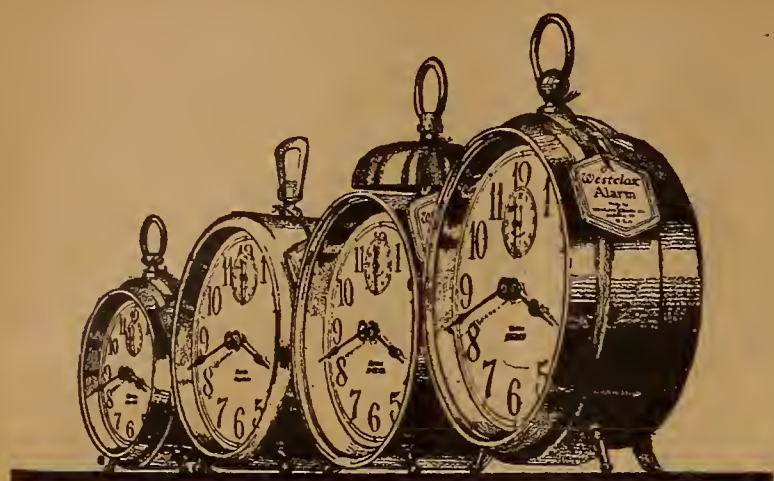
Take three pounds of halibut steak, one cup of bread crumbs, five eggs; run the steak through the meat grinder twice. Season with salt and pepper to taste. Beat the eggs separately, the whites very stiff. Mix the ingredients well together, fold in the egg whites, and place the mixture in a well-buttered timbale mold. Place



Photograph from Paul Thompson



Photograph from Harris & Ewing



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the mold in a pan of water, and steam twenty minutes in the oven. Serve with egg sauce or any relish desired.

Halibut is a fish which lends itself particularly to variety in cooking. It is, for instance, the basis of an exceedingly appetizing fish loaf which Mrs. Robert L. Owen uses frequently. Mrs. Owen, who is the wife of the Senator from Oklahoma, is a famous hostess. She gives interesting dinner parties, has a faculty for collecting worth-while people about her, and her menus are always original.

This recipe calls for one pound of halibut, one cup of milk, one teaspoon of flour, two cups of bread crumbs (war bread will do nicely), one-half cup of nuts chopped fine, two dozen blanched almonds. Boil the halibut, set aside until cool, and then break up into flakes. Mix with bread crumbs, nuts, and a cream sauce made of the milk thickened with flour; season to taste with salt, pepper, and paprika; mold into a loaf and bake until brown and thoroughly done. Stick the almonds in the top of the loaf.

Drawn butter or cream sauce may be served with this dish if desired. To blanch the almonds, shell them, put the meats in a bowl, pour boiling water over them, and soak for half an hour. Remove the skins, and plunge into ice water for a few minutes.

Oysters au gratin, combining fish and cheese, is another favorite dish with the Owen family. The materials required are one quart of oysters, one cup of milk, one teaspoon of flour, one pound of mild yellow cheese. Drain the oysters, put in a small stewpan, and steam for a few minutes until they are plump and the liquor is exhausted. Drain again, and dust with salt, pepper, and paprika to taste. Place in a baking dish a layer of oysters, a layer of cream sauce, and a layer of grated cheese, repeating until the dish is filled. Make the top layer of cheese thick. Bake in a medium oven until the cheese is melted and brown on top. Serve immediately and very hot.

Miss Agnes Hart Wilson, daughter of the Secretary of Labor, who is official hostess for her father and takes much of the burden of housekeeping from the shoulders of her invalid mother, combines eggs and fish in an appetizing fashion. Take six eggs, boiled hard, three-fourths cup of cracker crumbs, three-fourths cup of tuna fish, one pint of white sauce. Chop eggs, mix with fish and cracker crumbs, pour sauce over the mixture, season to taste, and bake until brown. Serve very hot. Salmon or chicken may be used instead of the tuna fish.

Macaroni cooked with cheese or tomatoes may be served as the principal dish at luncheon instead of meat; or, if a little cooked meat be added, in the Italian style, it makes an excellent "one-dish dinner." The one-dish meal is exceedingly popular abroad, and might profitably be tried out in this country. Properly selected, it contains all the necessary food elements, is easy to prepare, economical, and calculated to save a lot of dish-washing.

HERE'S a delicious macaroni recipe sponsored by Mrs. Franklin K. Lane, wife of the Secretary of the Interior: Boil macaroni in salted water until tender; drain through colander. Heat two tablespoons of butter in a saucepan, add the macaroni, half a cup of cold minced tongue (ham or other leftover cold meat may be substituted), half a cup of chopped mushrooms, and a quarter of a pound of grated cheese. Cover and set over fire until thoroughly hot. Heat one can of Italian tomato conserve piping hot, add to macaroni, and serve at once. A small glass of sherry wine or madeira may be heated with the conserve if desired, and is thought by many to improve the flavor of this dish.

Soybean croquettes are particularly satisfactory, and Mrs. Carl Vrooman, wife of the Assistant Secretary of Agriculture, vouches for the following method of preparing them: Two cups of boiled soybeans, two onions. Run the beans through a fine sieve or meat chopper. Chop onions fine, fry until transparent but not brown, and mix with the mashed beans. Season with salt, pepper, and a little paprika. Divide into equal parts, shape into croquettes, dip each into beaten egg, roll in bread or cracker crumbs, and fry in hot vegetable oil. Drain on paper, and serve hot with creole sauce.

The ingredients for the sauce are one tablespoon of fat, one tablespoon of flour, one cup of canned tomatoes, one onion chopped fine. Heat fat in a saucepan, stir in flour, and add tomatoes and chopped onion. Season with salt, pepper, and celery salt if desired, and stir until boiling. Strain into another saucepan, and add one-half cup of chopped green pepper; boil a few minutes, and serve. Soybeans have the advantage of being cheap as well as de-

cidedly flavorful, and contain almost as much protein as meat.

The home of Mrs. David Franklin Houston, wife of the Secretary of Agriculture, is never without baked apples. She has one method of preparing them for breakfast and another for supper—and she serves them for the children's supper almost every day. For breakfast: Remove the core of apples of equal size, and place in baking tin a little distance apart; put a little water in the pan, and bake in a moderate oven for thirty minutes; baste frequently. Serve with sugar and cream. For supper: Pare and core the desired number of cooking apples of equal size, fill the centers with sugar and butter; bake with a little water in the pan until tender, but not soft enough to lose their shape; baste frequently and brown lightly; sprinkle with granulated sugar and a little powdered cinnamon or grated nutmeg just before removing.

THE Houston family is so fond of war bread, which they started making when the necessity of saving wheat was strongest, that they continue to use it a great deal, although the ban on pure wheat flour has been lifted. Here's the recipe: One cup of milk or water, one teaspoon of salt, one-half yeast cake, one cup of rolled oats, three cups of flour. Scald the liquid, add salt, and pour over the oats. Cool half an hour, add the yeast mixed with one-fourth cup of warm water, add the flour. Knead, leave, and let rise until double the size. Knead again, and let rise in the pan until the size is doubled. Bake in a moderate oven for forty minutes. This quantity makes a loaf weighing about one and one-fourth pounds.

Being a Southerner—she hails from Texas—Mrs. Albert Sidney Burleson knows the true worth of cornmeal, and the campaign to increase the use of meal as a substitute for wheat flour was won before it was begun in her household. The Burleson family uses twice a day an "economical corn bread" which is simply made. The ingredients necessary are one cup of cornmeal, two tablespoons of melted lard, salt and cold water. Add the lard. Make into cakes the size of a griddle cake and the thickness of a baking powder biscuit, and brown on both sides on a greased griddle. Then place the cakes, griddle and all, in the oven, and bake until the meal is thoroughly done. A little molasses may be used to help the browning process, but Mrs. Burleson doesn't favor this.

In spite of the obvious necessity of her abiding by the regulations laid down by the Food Administration, Mrs. Herbert C. Hoover, wife of the Food Administrator, has won modest fame for her dinner parties. And she has introduced her guests to a toasted corn bread which is praised on all sides. She serves it at dinner instead of wheat bread. Here's the recipe: One pint of yellow cornmeal, one cup of milk, one cup of water, two teaspoons baking powder, one teaspoon of salt, one tablespoon of vegetable shortening, one teaspoon of syrup. Beat the ingredients well together, bake in a thin layer, split, toast, butter, and serve piping hot.

Here's a recipe for muffins which has been tried out with great success: A good pint of flour, two tablespoons of sifted meal, one tablespoon of lard, one-half teaspoon of soda, one teaspoon of cream of tartar. Mix to the consistency of batter with milk, and bake in muffin rings.

This is part of the lore contained in the Wilson family cookbook, a book of choice recipes collected by the President's mother, the late Mrs. Joseph R. Wilson, and copied by her into the blank pages of "Rip Van Winkle's Travels in Africa and Asia." The book is full of recipes for delectable things and has a pretty personal touch in the way so many "rules" are marked "Marion's favorite," "the Doctor's favorite," etc., referring to various members of the family.

"Woodrow's favorite"—and "Woodrow" can be no other than the President of the United States—is a charlotte russe made as follows: "Put into a kettle one ounce of gelatin, one quart of water, one-half pint of milk, one pound of sugar, yolks of four eggs, and four spoons of the sugar. When the ingredients are well mixed pour them upon the yolks and scald them, stirring all the while. Then strain through a sieve and pour it while hot on the four whites, which must first be beaten to a froth. Stir it constantly. When it is cold add a syllabub prepared as follows: One-half pint of cream and the remainder of the sugar; churn it, then lay it upon a sieve so that all the milk may drain out. Stir constantly until cold."

The cookbook is the property of Mrs. Joseph R. Wilson of Baltimore, wife of the President's brother.

An Aviation Meet

By Emily Rose Burt

TRY this plan for recruiting attendance at your next church social. It would also "fill the bill" for a jolly midwinter school party. The invitations are made to look like tickets of admission; the men's of red pasteboard and the girls' of blue. They read this way:

ADMIT TWO
To an Aviation Meet
In the — church parlors
Friday evening
February 21 8 o'clock

Each member who receives a ticket must make a point of inviting somebody else, and should conduct the guest personally to the social.

The hall or assembly rooms may be decorated with American and Allied colors, and it would be appropriate and effective to suspend in each window a trio of toy balloons, red, white, and blue in color, respectively. Miniature airplanes hung overhead at intervals down the length of the room would add realism.

In different places on the walls place conspicuously large posters boldly lettered with the program of events, as follows:

- | | |
|-------------------------|----------------|
| 1. Tests— | Loop the loop. |
| Ground work. | Reverse speed. |
| Control. | Low speed. |
| Balance. | Spin. |
| 2. Flights. | Nose dives. |
| 3. Stunts and Tricks— | Hands up. |
| Spiral. | 4. Air Races. |
| 5. Arrival of Air Mail. | |

To promote fun put up a few placards featuring certain well-known members in some of the events. For instance:

"See Charlie Hays loop the loop!"
or
"Mildred Brown's control is wonderful!"

A good leader can make this program go off well by calling on volunteers for the various contests. Sometimes people like better to take part in teams.

The first test, which is called "ground work," is a hopping stunt. The contestants hop on one foot to a given goal, and the one who does it most easily and gracefully and holds out best is declared victorious by the judges. Blue ribbon badges are pinned on the successful persons.

Next comes "control," which turns out to be facial control under difficulties. No matter what the funny, teasing, or pseudo-insulting remarks or performances of the onlookers, the contestants must retain calm and unmoved expressions as they stand in line.

"Balance" proves who best can poise an apple on the head and walk across the room. All the "balancers" start at the same moment, and the first successful ones are awarded the blue ribbon. Balancing peanuts on a knife blade and carrying them thus from one end of the room to the other is another way to execute the test.

When it is time for "flights" everybody is handed a paper aviation cap to put on. Then paper and pencils are passed and all are invited to take flight of fancy. These, it may be explained, may be rhymes, romances, or the biggest lies than can be recalled. A flight of oratory may also be offered. A committee of three appointed on the spot promises to report on the winners at the close of the evening. If preferred, a program of poems and short, comic, exaggerated stories may be prepared beforehand, and fill in this space with apparent promptness.

The "air races" are of two sorts: the "hot air" race, and the balloon race. In the "hot air" race the contestants are timed as to the number of words each can say in three minutes with the eyes shut. For the balloon race several strings are

stretched from one side of the room to the other, and the same number of toy balloons is supplied. The object is for the contestants to blow their respective balloons across the room, following as nearly as possible the courses of string. The choice of different colored balloons makes for interest and consequent "rooting."

The arrival of the air mail is heralded by the entrance of someone dressed in aviator's garments—warm helmet, goggles, gloves and all—carrying a mail sack (if real, a new one; but an imitation one suffices).

The aviator then proceeds to take out numerous packets which he hands to the guests as far as they go. There should be at least half as many packages as persons present. Each bundle is marked

"Owner unknown.
Find another to share this."

The explanation is that each recipient of a parcel must immediately seek a partner and, upon doing so, open the parcel. Enough sandwiches for two are revealed. Meanwhile, hot coffee or chocolate is being passed by pretty waitresses with Japanese fans stuck in their hair wing-wise.

The evening may end with a "musical flight," or, in other words, a rousing "sing."

NOTE: A full description of the stunts and tricks mentioned may be obtained by sending a stamped and self-addressed envelope to the Entertainment Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York City.

Dry and Wet Picking

By Jane Macpherson

I AM often asked, "Do you recommend dry or wet picking?"

The method to be used in picking a fowl is determined by the time it is to be used. The dry-picking method is used when the poultry is for future consumption, and the wet picking when it is for immediate use.

When fowls are dry-picked they are bled by thrusting a sharp knife through the right side of the roof of the mouth until the jugular vein is severed. Blood will immediately begin to spurt from the mouth. The brain is then pierced by thrusting the knife through the groove in the center of the mouth until it reaches the skull. This loosens the nerves that have control over the feathers. After this portion of the brain has been paralyzed the feathers come off easily.

The poultry will keep better if it is not drawn and the birds are kept without food for twenty-four hours before killing. The head should be wrapped neatly in paper and the feet left intact. In cold weather one can send the birds almost any distance by parcel post when dry-picked.

If the fowl is for immediate use it is a trifle quicker to scald it and use the wet method of picking. In this method the bloom is spoiled and the bird will not keep so well. All scalded fowls should be immediately drawn.

The feathers are now of greater consideration than in the past, and dry-picked feathers are more valuable than wet-picked either for selling or for home use. When dry-picking it is easy to separate the

different quality feathers as they are plucked and drop them into separate receptacles.

Where fifty birds and upwards are dressed annually, the feathers can be marketed for enough to make them pay a good part of the labor cost of dressing the fowls. Also the offal, that is too commonly wasted, if run through a meat chopper and washed, can be fed direct to the flock, preferably in a moist mash so that it will be evenly distributed and kept from becoming soiled in the runs or litters.

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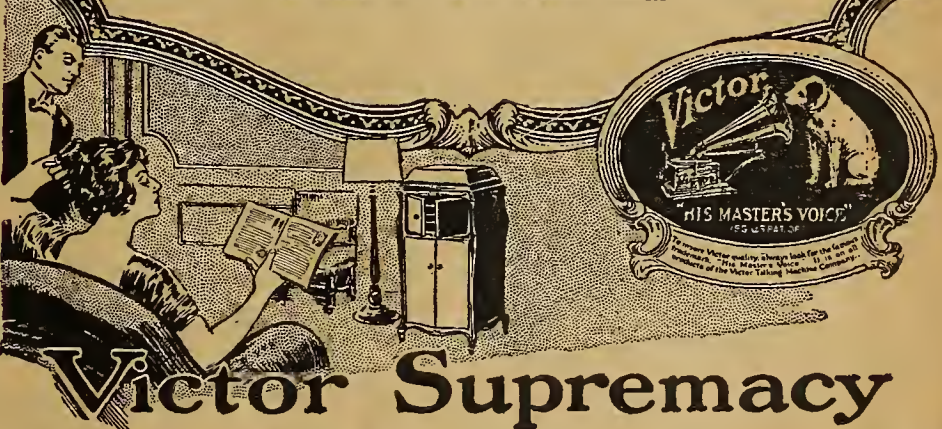
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Goose Meat from Grass

By Mark Sabin

DURING the past season I have found the making of goose meat out of grass to be an easy trick. It has been proved by scientific demonstration that the greatest profit in meat production results from making the greatest possible growth of the young animals from fresh, succulent pasture properly supplemented by just enough grain or other concentrates to insure rapid, steady growth, to be followed by a quick finish on full-grain feeding until the animal is fit and ripe for the block. This meat-making program holds true with pigs, lambs, young cattle, and no less so with geese.

A plan that is proving profitably attractive among a limited number of geese growers is to fence substantially a series of long narrow lots with strong poultry fencing, built high enough to discourage dogs. Then provide a succession of crops sufficient to furnish fresh, tender pasture from the earliest possible spring date until well into the winter. For example, a succession like rye and vetch for late fall, winter, and spring; a good clover and blue-grass sod, alfalfa, or sweet clover for spring and early summer. Then follow rape and kale, together with some sweet corn or field corn to cut for supplementary feeding should drought shorten the pasture supply.

The geese are rotated from lot to lot, and, except for a period in the breeding season and a few weeks' start for the goslings, hardly any grain is required. Handled in this way, with inexpensive shelters and some bright alfalfa or clover hay and silage for feeding the breeding stock in severe winter weather, geese are being made to produce from \$200 to \$300 gross income per acre, with much less labor and expense than are required with any other kind of poultry.

Here is another plan of goose-meat making where an orchard furnished the pasture, supplemented with plots of special green crops to be cut and fed as needed. This plan is being followed by Mrs. John Boehm, a New England goose enthusiast.

Mrs. Boehm believes the most important things to consider are vigorous, well-bred

easier than chickens. They require keeping warm, dry, and comfortable for only a few days, need some care and ground grain for the first two weeks, and then they can practically take care of themselves if furnished good, fresh pasture, clean drinking water, and dry, clean, airy sleeping quarters.

"My forty-two goslings hatched in May were fed only four bushels of grain (millet) until they were ready to fatten in November for the holiday market. But they kept a good orchard pasture and an adjoining clover lot grazed down as would a flock of sheep. They were also fed some fresh-cut green stuff, weeds, clover, sweet-corn stalks, etc.

"When ready for market they averaged \$4.50 each, and a few younger females, sold for breeders, brought \$3.50 each.

"The season's hatch stood me considerably better than \$150 after all the cost of the grain feed was deducted. The finishing period on a full-grain ration was only of three weeks' duration, and, of course, the breeding stock I am keeping over for next year's use will be fed scarcely any grain until a few weeks before the breeding season begins.

Chicks That Won't Die

By F. J. Harrington

I FIND that there are many people who would rather pay a little more than the price of day-old chicks if by so doing they could avoid the losses so often sustained during the first few weeks after baby chicks are delivered. Because of this fact, the business in the sale of "pound chickens," as they are called, is steadily growing. By the time chickens are large enough to weigh a pound they are well past the danger period, and are pretty likely to mature. Of course, it is not meant that they should actually weigh just a pound. Some people like to buy the chickens when they are three or four weeks old, and others want to wait a few weeks longer.

When this demand for older chickens



Her hens thresh their own grain, getting double value—feed and exercise

breeding stock (she keeps the Toulouse breed), then make sure they are happily mated well in advance of the breeding season. Geese are not naturally polygamous, and unless handled just right they are likely to object to increasing their family responsibilities by taking on more than one husband or wife.

Another matter of equal importance is to bring the geese-breeding stock through the winter so that strength and vigor will be assured in the spring rather than fatness and flabbiness, which will result from overfeeding with too much corn and other concentrated feeds and lack of opportunity to range in a good-sized field.

Here is Mrs. Boehm's goose-raising operations for the past year given in her own words:

"I wintered three two-year-old Toulouse geese mated to one three-year-old gander. I set only fifty-seven eggs, five eggs to each chicken hen, and hatched fifty-one goslings. Of these, I raised forty-two to marketing age. There was not one sick gosling among them, but nine were carried off by foxes.

"The raising of goslings I find much

first arose, some difficulty was found in figuring the price to charge for them. The plan adopted by many growers of adding five cents for each week seems to be the most satisfactory. That means that a chicken which would cost 20 cents when a day old would cost 50 cents at the end of six weeks. Probably the 50-cent chick is worth as much more to the buyer if the latter happens to be an amateur without much time to give his birds. My own observation is that the demand for partly developed chickens will cut into the baby-chick business considerably, but the distance to which they can be expressed is somewhat shorter than in the case of day-old chicks. Moreover, the express charges are greater.

The pound-chick trade seems to me to be best adapted to the poultryman who has built up a heavy-laying strain, and who can deliver chicks throughout his own adjoining counties and adjacent territory which he can reach by advertising in county and city papers. Such chicks, when safely over the critical stage, make a surer foundation for continued future business than is the case with baby chicks or hatching eggs.

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The Mystery at Glen Cove

(CONTINUED FROM PAGE 39)

almond-eyed friend will bear watching, that's certain."

As he spoke, the dejection I had observed before, and the reason for which I knew so well, descended over him. He shrugged his shoulders wearily.

"I—I wish I knew what to do," he murmured to himself in a helpless, timid fashion, quite foreign to him.

We strolled back to the house presently, without speaking, and resumed our chairs on the veranda. It looked as if "the great Glen Cove mystery" would never be solved until some one of those implicated chose to speak.

Presently Toguchi, the butler, appeared to say, smoothly, that Mr. Steele was wanted at the telephone. My suspicions being immediately aroused by the similarity of the summons which had nearly ended the career of Carter, I followed my companion.

The butler, however, discreetly withdrew, and nothing in any way untoward occurred. Steele's occasional monosyllabic comments coming to me from inside the telephone closet reassured me. I was nevertheless relieved when, after perhaps five minutes, he rejoined me.

I noticed at once that he was laboring under suppressed excitement. All his lethargic hesitancy had vanished, and again he was the hound unleashed.

"It was from Marie," he said softly, his voice trembling in spite of his effort to control himself.

"Damn!" I ejaculated. But he apparently failed to notice the significance of the interjection.

"I want you to get the Debetts' car, the roadster, at once," he said rapidly. "Fill her up with gas, and have the engine started. I'll be out to the garage in three minutes. I'm going on a trip."

"Why not the railroad?" I suggested.

"The trains are watched."

I said no more, but went at once to execute his bidding. The car was put in order quickly, as I directed, and a moment later Steele, his face curiously drawn, came in, and stepped lightly into the machine.

"You're not going alone?" I suggested hopefully.

"Absolutely," was the disconcerting reply. With a clash of shifting gears the great car rolled smoothly out of the garage, and shot down the driveway.

DEJECTED and hurt at being so utterly excluded from my friend's plans, but having sufficient confidence in his judgment to realize that it doubtless was for the best, I strolled listlessly back to the house.

Wearily I sank into my chair on the veranda. My eyes closed, and doubtless I dozed for perhaps half an hour.

I was aroused by a strangely familiar voice.

"Good morning, sir!"

I lay passive a second longer, collecting my sleepy wits and striving to recollect where I had heard that voice before. Then it flashed upon me, and I opened my eyes in something like terror.

Before me stood the stocky gentleman who had pursued me at Harlem, and who had been my captor at White Plains. He was smiling broadly, and plainly enjoying my quite obvious discomfiture.

"Good morning!" he repeated.

I gathered my scattered wits together sufficiently to return his greeting, making a vigorous endeavor to seem the embodiment of indifference.

"To what am I indebted for this call?" I drawled.

"Well, sir, it really is not you that I am calling upon," was the rather surprising rejoinder.

I concealed my amazement, and put another question with equal listlessness.

"And who is it you wish to see?" I inquired.

"It's Mr. Steele this morning."

"You have come far for the purpose?"

"Rather."

"I'm sorry."

"Why?"

"Because Mr. Steele left here some minutes since."

It was his turn to manifest astonishment.

"But the trains—!"

"Are watched, of course," I supplied.

"And the roads."

"No doubt. But there are bridle paths. And it would not be impossible to go overland through the golf links, you know."

"The devil take him!" he ejaculated.

"No," I said smoothly, "a four-cylinder Peugeot."

"Where was he going?" asked my visitor, a deep furrow between his eyes.

"He failed to mention," I replied truthfully. "How about me? Won't I do?"

He shook his head, and started to make off. The truth gradually dawned upon me.

"You mean—I can go home?"

"Anywhere you like," he jerked over his head just before he disappeared in the hedge bordering the roadway.

So the United States Secret Service had no further interest in me! It was puzzling. And it was not a little humiliating. They had taken my measure, and found me of no importance. Well, at least I could bathe once more in my own tub and dress in my own rooms.

Even in my lodgings, however, I did not enjoy peace for very long. As I was dressing for dinner a telephone message came from Admiral Debreth requesting my presence at the Oaks immediately on a matter of great urgency.

Without delay I hastened to answer my summons, and found that a telegram had been received for me. It read:

Come at once. Washington. Willard Hotel. S.

I consulted a timetable, and discovered that by making the closest connections I could be in Washington by midnight.

A MOMENT later a servant appeared with my hat. Even in the excitement of the moment I realized that there was something unusual. Then it flashed upon me what I missed.

"Where is Toguchi?" I asked.

The admiral shrugged his shoulders.

"The rascal threw up his job this afternoon."

"Any explanations?"

"Said something about a better job in the city; but, somehow, I didn't believe him. Why, what made you ask?"

"Oh, nothing," I replied. But all the way to the train I was wondering if there was any connection between his sudden disappearance and the business afoot.

My suspicions were not confirmed, however, until I entered the Washington train at the New York terminal. Then my heart gave a great bound. In the fourth seat in front of me, across the aisle, sat Toguchi!

It was not a fast train, and the time dragged interminably before we drew into the station at Washington. I had occupied myself with all sorts of fruitless speculations as to the destination of my mysterious traveling companion, and I rejoiced at the opportunity to experience something like action.

By careful dodging I managed to keep him in sight without giving him any intimation that he was being trailed.

As I sped along in pursuit I had the at once comforting and disappointing thought that all my suspicions of the erstwhile butler might prove entirely groundless. He might, after all, be everything that he professed to be.

But I could not drive from my mind the recollection of the man eavesdropping at the telephone, nor the still more significant proximity he had held, on the night of the tragedy, to the switchbox. On top of that, his sudden departure for Washington coincidentally with my wire from Steele left me no choice. I had to go on with the disagreeable task, if only to assure myself that it was one of folly.

My quarry glided swiftly down a side street leading from the station—and suddenly vanished. He had evidently entered a small and unpretentious, not to say shabby, saloon. Acting upon that supposition, I pushed open the swinging doors myself.

In spite of every effort to keep calm, my heart was beating like a triphammer. But nothing untoward met my gaze. Save for a few belated loafers and a single bartender, who was polishing his glasses, the place was deserted.

The bartender looked up inquiringly, and I ordered a glass of beer. While I was drinking it my mind was moving rapidly. My man was not to be seen, but he must be near at hand. The saloon was not entirely given up to a bar-room; it ran further back, the space divided into little cubicles, with a curtain drawn before them. I risked everything on one question.

"I am expecting to meet a chap here," I said to the bartender with as much nonchalance as I could muster. "Japanese."

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tender never so much as looked up from his work. He jerked his thumb toward the rear.

"He come in just a minute ago. The other guy's been waitin' mos' an hour."

So there was another! I might have known it. I thanked my informant and strolled indifferently toward the curtained stalls at the rear.

I listened cautiously. The first booth I quickly discovered was occupied by a man and a girl. The second and third were empty. But in the fourth and last I could hear voices. One, unquestionably, was Toguchi's. The other, though it seemed vaguely familiar, I could not for the moment place.

My heart fluttering at the excitement of the situation, I slipped into the adjoining stall.

The walls of the chamber were constructed of cheap pine boards, hung with burlap. It took but a moment to discover a knot hole and, pushing aside the covering, to apply my eye to the aperture.

At the side of the table furthest from me sat Toguchi, talking earnestly. With his back to me sat a man whose voice I had already recognized. The outline of his figure I knew that I had seen somewhere before. But it was not until he shifted his weight and I caught a glimpse of the side of his face that I remembered where.

It was the man who had tried to stab me in the moonlit glade in the Burchard woods!

THOUGH I strained my ears to the uttermost, I could catch only an occasional word. It was maddening to be so near to revelation and yet as effectually excluded as if a million miles away.

I had been there perhaps ten minutes when my ears caught the sound of footfalls on the passage outside. I held my breath as they paused for an instant at my booth. Then they passed on to the next one.

I glued my eye to the friendly knot hole, but my field of vision was restricted. I could see only a corner of the curtain at the door, but from its faint movement I judged that it had been drawn aside.

I could hear voices, low but extraordinarily intense. The man with his back to me was doing most of the talking, I gathered. The new arrival appeared to say nothing. Then the man I had recognized as "Paul" seemed to rise suddenly, and all my view of the room was blotted out, as his back covered the aperture. I caught a strange sound, as of books being slammed together, twice repeated. A choking gasp. The crash of a falling chair. Then complete silence.

I rushed into the little hallway, and saw emerging from the booth beyond, his back toward me, but with enough of his face exposed for complete recognition, the last man in the world I had expected to see—Carter.

He turned sharply at my ejaculation, and I fancied that I caught a lightning-like movement toward the hip. Then he seemed to recognize me, and a rather grim smile softened his features.

"Oh, how do you do?" he said with the most astonishing urbanity, quite as if he were encountering me in a fashionable drawing-room.

"I—I'm quite well, th-thank you," I stammered, utterly nonplused by his perfect self-possession. But his next words made me reel. The bartender, attracted by the unusual sounds in the rear, had come into the passage. Carter addressed him.

"There are two men in that stall yonder," he said quite easily, indicating his meaning with a jerk of his thumb. "One is dead, and the other I think will be presently. I shot them both. Doubtless it will be well for you to summon the police."

The bartender, having received this astonishing intelligence, drew aside the curtains to the booth. The man I had recognized as Paul lay sprawled, face forward, on the table, a purpling hole in his forehead. The Japanese had fallen to the floor, his hand still clutching a small revolver. A swift glance at the weapon made me understand the peculiar noise I had heard. Around its barrel was a cylindrical affair. Carter, no doubt, was similarly provided. I recalled that a "silencer" makes a pistol shot sound like the snap of a firecracker.

Carter watched the examination with a kind of grim amusement. When he caught my eye he smiled, and nodded toward the front of the place.

"While they're ringing up the authorities, won't you join me in a glass of something?"

I agreed with not a little alacrity. My nerves were sadly shaken by the terrible business, and with a shaking hand I poured

from the bottle extended to me by the pallid bartender. My own condition made me marvel the more at the absolute equanimity of my companion. Not by the flicker of an eyelash did he indicate that his pulse was exceeding, by a single beat, its normal rate.

I became convinced, as I studied him, that the predominating feeling in his heart was one of relief. This man, who had just delivered a murderous assault on two fellow beings, acted for all the world like a man from whom a great load has been lifted.

Even the rough habitués of the place, who were more accustomed to scenes of violence than I was, were aghast at his utter self-possession.

It seemed a long time before the soft clang of a bell and the clatter of hoofs indicated the arrival of the police. Half a dozen burly policemen entered.

Carter drained his glass quite leisurely, and turned to one of them.

"Will you be good enough to take charge of that?" he said, handing over his pistol. "I should hate to lose it."

Then he turned to me.

"Possibly you would be good enough to come with me and add your assurances that this highly respectable public house is in no way to blame for my deplorable conduct?" he suggested with a pleasant smile. As one of the officers added his weight to the suggestion, and not so pleasantly, I followed the party out, and, for the first time in my life, enjoyed the pleasure of a ride in a patrol wagon.

When we reached the station, Carter was led up to the sergeant, who peered over his desk at him rather surprisedly. Carter was not at all like the ordinary murderer of commerce.

"If this—er—leech will release me—" he began pleasantly.

At a nod from the sergeant the patrolman relaxed his hold.

"Now then, sir, you will understand that I have nothing whatever to say. You know already the facts of this case, and that is all, I regret to say, that I am permitted to tell you. And now," he went on, as calmly as if he himself had been the presiding magistrate, "I must ask you to permit me to use your telephone."

As the sergeant frowned a little doubtfully, Carter broke into a pleasant smile.

"After that you may do with me as you think best," he said easily.

Without further discussion he picked up the instrument at the officer's elbow and asked for a number I did not recognize. It meant something to the sergeant, apparently, for his face immediately took on an alert expression. Carter got his connection quickly.

"Sixty-four speaking," he said. "I am at the—" He turned interrogatively to the police officer, who supplied the name of the station. "Under charge of murder. Will you come at once? Thanks, very much."

He hung up the receiver, and with easy nonchalance lighted a cigarette.

"Shall we sit down?" he said easily.

THE sergeant scratched his head. It seemed to me that he was trying to remember something. Then he fell back on routine.

"Your name?" he asked, fingering a pen.

"If I may say so, Sergeant, you will spare yourself unnecessary labor in booking me if you will postpone that ceremony a few moments. As you have doubtless gathered, this is not a—er—strictly usual case." He leaned forward suddenly, whispering in the officer's ear. What he said must have been illuminating, for the sergeant at once put down his pen, whistling softly to himself.

It was a curious situation. Here was a self-confessed murderer, caught in the very commitment of the act, suggesting that his booking be postponed, and the officer in charge promptly acquiescing. It brought my curiosity to a fever heat to know who the mysterious Mr. Carter might really be. My thoughts culminated uncontrollably in speech.

"Who the devil are you, anyway?" I burst forth in an undertone.

He replied with a maddening smile.

"As to that, my dear sir, I shall doubtless be privileged to acquaint you in good season. In the meantime"—a curiously wistful expression seemed to gleam in the depths of his dark eyes—"in the meantime I trust that you will not permit appearances to prejudice your good opinion of me."

Before I could put another question he had leaped to his feet. I became aware that the door had opened, and that two gentlemen, one young, about his own age, [CONTINUED ON PAGE 57]



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Why Some Children Are Delicate

By Helen Johnson Keyes

THOUGH we may not realize it, much of our ill-health is due to stomach trouble. In fact, prominent physicians have told me that it is unusual to find either children or grown-ups with good digestions.

This affliction, which may last a lifetime, often begins in the second year of babyhood. By putting into our child's poor little stomach foods which it is not yet strong enough to take care of, we upset its machinery forever, perhaps.

Feeding during the second year should be as careful as that of the nursing or bottle-fed infant. Children of this age should not sit at the table with the rest of the family, where there is constant temptation to give them unsuitable food. They should have their own simple meals at their own hours.

If this is done, mothers need not fear teething or that dreaded "second summer." I wish that you would believe me when I tell you that no sickness is caused by the coming in of the teeth. They are cut at an age when most babies are being badly fed, and so we have thought that the teeth cause the illness.

As a matter of fact, it is the food which causes the illness. Mothers neglect fretfulness and fever in a teething baby, saying: "Oh, it is only a tooth." And because they do not seek a remedy for the condition it often grows worse and worse, until, sometimes, the precious baby dies.

If your baby vomits or has diarrhea, it is because there is undigested material in his body which is producing poisons through his digestive tract. The first thing for you to do is to give him a dose of castor oil, or, if he is in distress and needs immediate relief, an injection of a tablespoonful of olive oil, followed by a pint of warm soapsuds. Stop feeding him for half a day. Then try a little barley water—about one quarter of the amount which he is in the habit of receiving of milk, if he is an infant, and about two ounces if he is over a year old. If he keeps this on his stomach, repeat the dose in a couple of hours. If he is much better by this time, add a fourth of whole milk. Work up very, very slowly to the amount of food he was taking before his illness. Do not be afraid of starving him. If he is suffering from very bad indigestion, he can go safely for twenty-four hours without anything.

You will see the common sense of this if you remember that food cannot nourish the body unless the stomach and intestines act upon it as they do when they are in good condition. Therefore, when we put food into a stomach which is too sick to take care of it, not one particle of nourishment is received by the body from that food. On the contrary, it lies, an undigested mass, in the digestive organs, producing poisons. If he is weak and needs nourishment, your task is to get his stomach into a condition to extract nourishment, and that can be done only by giving it a complete rest for a few hours and getting rid of all that is in it and the bowels.

Another Theory Exploded

Formerly it was the belief that children must have contagious diseases—measles, mumps, whooping cough, chicken pox, and so forth. Parents actually exposed their boys and girls to these maladies in order to "get through with them." We have learned, however, that a great many more deaths result than we supposed, and, moreover, that many, many children who recover are left delicate.

Eye weaknesses, deafness, consumption, and nervous conditions, such as St. Vitus' dance, frequently follow these diseases of childhood. No precaution should be regarded as too much trouble to take, and if there are neighbors who consider you unfriendly because you do not allow visitors in the sick room or because you keep your family away from their sick members—why, you will just have to bear it for the sake of protecting our boys and girls. They are even more important than our neighbor's feelings.

If you feel that your daughter does not "eat enough to keep a bird alive," find out what she is devouring between meals. Little lunches taken after an insufficient breakfast spoil the appetite for dinner, and leave the stomach with an empty feeling which drives the bird-like appetite to the pantry in the middle of the afternoon, so

that it is not ready for food again at supper time.

There are two bad things about this between-meal eating: One is that the kind of food eaten in this way is not nourishing, but consists of sweets, which are very distressing to an empty stomach. The second is that they keep the stomach constantly at work, whereas it must have a complete rest between its labors if it is to remain in good working condition.

Limit your daughter's eating to her regular meals until she eats enough at them. If you balance her food properly she will not feel a craving for sweets in between. Every housekeeper should learn what dishes to set before the family at one time, so that the balance will be correct and satisfying between proteins, starches, fats, and mineral salts (ash). These facts are brought into our homes by women's magazines and by government bulletins. The best cure for a craving for food between meals is well-balanced rations at meals. If, despite a hearty appetite three times a day, growing boys and girls want extra food, let it be taken at regular hours, and let the cake or cookie be accompanied by a glass of milk.

How About Air and Exercise?

It is natural to growing youth to eat, and if the desire for food is really not active, something is wrong. Having satisfied yourself that sweets are not being consumed between meals, consider whether your children are getting fresh air and exercise enough.

The air which our lungs breathe back into the room where we are has lost most of its oxygen, and oxygen is what our blood must receive from our breathing organs in order to keep our bodies healthy.

A window should always be open at night in a bedroom—it should be open at top and bottom in order to let the breathed-up air, which rises to the top, pass out and the new air come in below. In the mild weather it is best to sleep out of doors, if one can. During the day, occupied rooms should be aired from an open window several times. Air which is full of oxygen heats more rapidly than air from which the oxygen has been exhausted, so the temporary chill will soon pass.

And what about play? Young people must play to be well. Best of all are the rough-and-tumble sports in the open. Perhaps you feel that, because there is so much exercise in farm work, exercise in play is not necessary. Have you heard the story of the little girl who walked two miles to school every day and two miles home again, and who begged for a school playground where she could exercise?

The teacher said: "Why, surely, Lucy, you have exercise enough walking to and from school so far!"

"Oh," explained Lucy, "I want the playground so as to get rested for the walk home."

Lucy hit upon a big truth: We need fun in order to get rested for work.

And as for work: I think we can make that a great deal less dull than it usually is for our young people by putting into it the new interest of trying to perform it in some better way. It is the dull grind of doing the same thing over and over without any change which wears us out and makes us feel "delicate."

Almost every task in the home is capable of being executed more easily and in a more effective fashion than we have been doing it. Suggest to the delicate daughter that she invent a more convenient arrangement for the kitchen furniture, in order to save time and strength in the preparation of meals. Suggest to your son that he could save half an hour every day by "routing" his work more carefully. Such inventions give the worker an interest in what he has to do, which keeps away "that tired feeling."

If we feed our youngsters properly, protect them against illness, fill their lungs with fresh air, their hearts with fun, and their work with interest, there will be few delicate ones among them.

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A Plea for Mops and Brooms

By Ruth M. Boyle

I CAN remember the time when my broom and dust pan were always standing in my way in a corner of the kitchen, and the rest of my cleaning equipment, consisting of a wet mop, a scrub brush, two pails, and some unbeautiful cleaning cloths, disfigured my back porch. For years I did my cleaning with these primitive utensils—sweeping, scrubbing, polishing, without realizing that times had changed since my mother taught me the methods grandmother had taught her.

The day that I woke up to the idea of a cleaning closet filled with convenient and effective implements was a red letter day. When I decided to have a cleaning closet and to fill it with up-to-date equipment, I had begun to realize that I was wasting hours of time, and no one knows how much strength, in toiling with that broom and mop. I now realize that I wasn't really cleaning my house as it should be cleaned. A good deal of the time I was simply stirring up dirt or not affecting it at all.

I had the closet built in a recess in one corner of the kitchen. It is 9 feet high, 18 inches deep, and 3 feet wide, and is painted white throughout. A shelf for bottles and cans of cleaning material is built 5 feet 6 inches from the floor, and the cleat from which the mops and brooms hang is 5 feet 3 inches from the floor. The dustpan and some of the shorter brushes hang 3 feet from the floor. All are provided with screw eyes fastened to the ends, for convenient hanging, and all cloths are hung up by means of tape loops.

Everything that I use in cleaning is in that closet. A supply of new cloths is kept in a tin box on the floor, so that I never have to waste time in hunting something with which to dust and polish. A small tin lard pail and an old enamel saucepan are on the shelf ready for cleaning preparations which must be mixed in them. A basket for carrying materials and small brushes conveniently hangs from the shelf, and a chamois for polishing metals and glass hangs in its place beside the oiled dust cloths.

A hand-power vacuum cleaner, with which I can clean walls and furniture as well as floors, is the most important of my implements. I never knew what really cleaning a rug or floor meant until I acquired my vacuum cleaner, and even at that it probably does not do the work as thoroughly as a power cleaner would do it.

A carpet sweeper takes up surface dirt, crumbs, lint, and thread from sewing, etc., when I am in a hurry and do not want to use the vacuum cleaner. A good corn broom does good service, although it isn't in use a third as much as it used to be, and a whisk broom is often handy. Two good camel's-hair paint brushes of different sizes help me in cleaning the crevices in my good furniture, and two small vegetable brushes find a hundred uses.

I use a dry string mop, oiled, for the bare floors in my dining room, living-room, and bedrooms, and a wet mop for kitchen and porches. A mop wringer fastened to a pail saves me the unpleasant task of wringing out the mop with my hands, and saves strength besides. I save old underclothing particularly for mop cloths, because it is soft and absorbent and not linty.

A stiff scrub brush and two galvanized iron pails are also included in the outfit. For dusters I use a soft cloth that does not shed lint. I find old silk clothing makes excellent dusters. To make these dustless I oil them slightly, putting a little oil in one corner of the cloth, rolling it tightly, and leaving it a few minutes for the oil to spread through. Too much oil is apt to give a streaky appearance or to darken wood-work. My dustpan is a long-handled one that has a trap which opens automatically when I set it in position on the floor, and closes without losing a scrap of dirt when I lift it up.

An ordinary dish mop with a wooden handle helps me to clean out difficult corners and small spaces, and a small step-ladder enables me to reach the high places. When cleaning I wear heavy denim aprons and rubber gloves, and these are kept in the closet also. Several tools which I am constantly needing when I am cleaning I keep in a box with my cleaning materials—a tack hammer, a screw driver, a tack puller, and an assortment of nails, screws, and tacks.

On the shelf are a collection of the cleaning liquids, washing powders, and polishing materials that I use in cleaning. A supply of kerosene, ammonia, alcohol, and linseed oil is kept in pint jars plainly labeled.

Some of the other materials which I find necessary are soap, floor wax, washing soda, furniture polish, bath brick, stove polish, and a good scouring preparation.

Before putting mops and brushes back in the closet I see that they are thoroughly clean. Most of them can be cleansed very well with soap and water. My dry mop I wash occasionally in washing soda and water. My dusters go into the weekly wash as regularly as the towels and table linen.

I used to dislike cleaning days thoroughly. The strong soap and hot water made my hands red and rough, I breathed in dust, and the cap I wore was hot and disarranged my hair. Now I go about it systematically. In a moment I can collect all the materials I will need for cleaning. In the living-room, I dust off pictures, bric-a-brac and furniture, and cover them or put them in another room. Then I clean the floor with vacuum cleaner and dry mop. The kitchen is even easier, and altogether cleaning is one of the least strenuous and most satisfactory of my duties as house-keeper.

The Mystery at Glen Cove

[CONTINUED FROM PAGE 54]

and the other much older, had entered the dreary police station.

Carter joined the newcomers immediately, and the three withdrew to a far corner of the room. For a minute or two they were busy in earnest whispers, Carter, I gathered, doing most of the talking.

Then the younger of the two newcomers detached himself, and stepped over to the sergeant, who sat chewing his pen wonderingly. There was a moment's low-voiced confab, the policeman nodding from time to time. Then a dubious frown formed on his forehead, and he seemed to be offering some sort of objection. The younger man shrugged his shoulders and rejoined his companion. After a word or two the older man also went over to the desk for a whispered consultation, and presently, to my surprise, the sergeant climbed down from his stool and went outdoors.

There was no one to be seen from the window near which I was standing, but across the street was a limousine, its curtains drawn closely. As I peered through the glass into the darkness I saw a dark figure emerge from the gloom by the car, and a moment later the sergeant reappeared.

Another consultation followed between him and Carter and the two strangers. Then

Carter suddenly extended his hand, to be accepted and warmly shaken by the sergeant.

Just before they went out, Carter stopped before me.

"You can go now, if you like, old chap," he said, as calmly as a man dismissing a cab.

"And you?" I gasped.

He smiled inscrutably.

"We shall meet again, I feel sure," he murmured. Before I realized it the door had closed upon him and his two companions.

I turned to stare at the sergeant. He stared back at me. To an observer it would have been difficult to say which was the more bewildered.

I pulled myself together sufficiently to bid the sergeant good night. He nodded stupidly, blinking at me like an old owl, and I went out.

Pulling my coat about my ears, I walked until I caught a belated taxi, and ten minutes later, just as faint pencils of rose began to mark the eastern sky, I walked into the Willard.

When I asked for Steele the night clerk handed me an envelope.

"Wait for me here" was all it said.

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The Man With a Limp

[CONTINUED FROM PAGE 8]



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The word burst from the big sergeant. Ritter was the sergeant's name—a typical Prussian, with heavy neck, close-cropped black hair, and imperial upturned mustaches. He stood stiff and jointless, and his wrath seemed scarcely to be contained by the straining buttons of his military jacket.

"You!" he screamed hoarsely. "You would look out of windows when I am in the room! Stand at attention!"

It was a bad beginning thus to have aroused the ignorant animosity of Top-Sergeant Ritter. Minch soon had his first reason to know it.

"What branch of service is it you wish to enter?" the Prussian asked him in a tone so deferential as to be sneering.

Minch had long been advised as to what to choose.

"The infantry, Herr Sergeant," he answered.

Ritter laughed, and turned to the clerk who waited alongside, book in hand, to enter all these questions and answers.

"This one who looks out of the windows would be a cavalryman—note it so."

Minch had had his choice, as was his right; and he became a cavalryman.

His clothes were dealt out to him. They were neither better nor worse than he had always worn. The steel helmet, or *pickelhaube*, was too large for him. In the first six weeks he had to endure the pain of that loose steel thing that would rest nowhere but on the bridge of his nose. Headache, eye-strain, these things counted for nothing with Ritter—or perhaps they counted for a great deal. Perhaps it was through that helmet of slow torture that Ritter showed his authority.

The food was revolting, but the ceaseless grind of drill, drill, drill fifteen hours or more of each day, made him eager for whatever might stay his ravenous hunger. "Machine grease" was the name given to the morning porridge of ground peas and fat. Only a starving rookie could have stomachached it. The "old bones," men more than a year in the service, took pleasure in the one act of insubordination that was allowed them. They accepted their dishes of "machine grease" from the big kettle, and forthwith dumped them into the garbage trough. It was a poor sort of insubordination, since it left the "old bones" hungry.

"What a wonderful machine!" I have heard men exclaim of the German army—men like Reynolds. A machine, yes; but a cheap, sordid, ugly thing to mold men to a standard of trembling servility. One might not think; one might not talk; one might only drill; march in step with every other one; salute every Prussian corporal; and remember to have regard for the "high-born!"

I remember the day when Minch gave way to this hot outburst. It was that day when the papers told of the Kaiser having sent to the Crown Prince a decoration in honor of his "victory of Verdun"—the Order of Merit, with oak leaves. I had asked Minch what was the significance of the added honor, "with oak leaves."

"Baubles! Toys to please children!" he answered jerkily, and with a contemptuous wave of his free hand. The other held a fragile glass pipette into which he had just measured some ounces of a chemical. It was part of an experiment on which

we were both working, and which we hoped might have its part in the winning of the war.

He held the glass tube to the light and observed it carefully and steadily. Then, in his even, quiet tone, he talked:

"At Hanau I took part in the maneuvers. Three hundred thousand men played at war for five days. For an army that part of it was worth while. It was even necessary, if the army was ever to be of use. But on the sixth day, the day after the maneuvers were finished, it rained at Hanau. It rained, you will understand, on the very day the Kaiser had chosen to review those three hundred thousand men. A deluge turned that country for miles around into a quagmire.

hesitating question as to what had happened to him, to leave him with such an awkward, crab-like manner of walking. The question had held my curiosity from the very first, the more so because the man was so delicately and firmly poised. Working beside him and with him, as I had done for many weeks, I could not fail to notice or indeed to envy, the strength and originality of his mind, and, excepting when he walked, the harmony and beauty of his movements. It was as if his mind and body were a perfect texture, like strong, soft silk. I could not imagine what that thing was which had so distorted his gait without breaking some of the threads of this silken weave.

"It was in the little town of Lichtzau," he continued. "My regiment was quartered there after four months of service in Berlin. It was almost at the end of my three years of service." A moment's reflection seemed to revive the almost forgotten scene. "Only when I see that time through a long perspective of years can I realize what my three years of service had done to me. Now, looking back, I can re-

call the quiet loveliness of the town, how deeply green were its fatherly trees, the almost holy beauty of forest and mountain and the ancient lichen-covered castle; but it has taken the years to make that picture."

Minch closed his eyes tightly for a moment, as if by force to close from sight another—an unpleasant—vision. He opened them with a start.

"God!" he exclaimed, "what a raw, ugly sore had been fretted into my heart. The dull, sickening monotony of the barracks, the petty disputes, the ignorant savagery which could talk of nothing but women and worse!"

"Only that my discharge was soon to come, I would have gone mad in that vermin town of Lichtzau. Nor was I the only one. I wondered then, as I have often done since, what could be the fear which held us from tearing at the bull-like throats of the Prussian sergeants."

"I have spoken of the Jew Krantz. Some devil of brutality had chosen him for the butt of Top-Sergeant Ritter's malice. Petty indignities, galling reprimands, every disagreeable duty that an ignorant taskmaster

could conceive—those were the Jew's portion. And he must bear them with ever the prospect that there would be no end. He could not look for relief at the end of his service. Why? Because he knew, every one knew, that it was only a matter of time until these petty damnations would give place to some plot—some "frame-up" as we say in America—by which he would be sent to the military penitentiary. It is a terrible thing to see a man's spirit breaking!"

It was several minutes before he resumed:

"Have I spoken of the beautiful and ancient castle of Lichtzau? It was the reason for our being stationed at that place. The castle must be guarded! This castle, which contained nothing but centuries-old memories, which was of such massive walls as to have survived the wars of a thousand years!"

"Year after year, and every day in every year, and every fifteen minutes of every day and night, four German freemen, such as were I and Krantz the Jew, must march back and forth, one on each side of that castle of Lichtzau. Day and night, with every quarter hour, each sentry, when he came to the end of his beat, sang out the word to the next. [CONTINUED ON PAGE 21]



I saw the poor Jew as he plunged through the window

"Can you conceive of three hundred thousand men—straight, soldierly men, like that one of whom Reynolds approved—marching past one point? It is too much. The eye cannot see such a sight; the mind cannot comprehend such numbers of mere ones, all marching in step. For they marched in step, while the Kaiser stood; from nowhere to nowhere through a sea of mud. And when the last of the line had dragged itself over the hill the Kaiser conferred upon himself the Order of Merit—with oak leaves."

The fragile pipette fell in fragments to the floor. The chemicals ran in disorderly streams over Minch's hand, and mingled with the little trickles of blood that welled from the cuts where he had ground the particles of glass into his flesh.

He turned away to the basin, and washed his hands clean of the mess. When he took his place at his bench his face had resumed its calm. He went about his work in silence.

"It all came about through a Jew—Krantz, his name was—a man in the first year of his training. He was not the cause, but he was the spark—shall I call it?—that set fire to my hot, inflammable hatred against the whole ignorant machine."

Minch's remark was in answer to my

The Finest Investment You Can Make is to Help the Right Young Man Find the Right Job

By Bruce Barton

IN AN office not far from mine is a man thirty-six years old whose title is "Office Manager." So far as salary is concerned he is not a failure. He makes a living for himself and family; he carries a little life insurance and saves a little money.

But in his heart he knows he has failed; he is a woeful, pathetic misfit.

Nature intended him for a farmer: he wanted to go to an agricultural college, and his father sent him to a business school instead. The call of the soil is in his ears, and he must stifle it with the click of a typewriter.

He is one of the vast army of those whose brief time on this earth has been largely lost because they never found the work for which they were made.

When I consider how vast that army is, and the bitterness of its tragedy, I marvel that fathers do not consider the question of their sons' careers with prayer and fasting.

Instead of which there are many men who treat the lives of their sons as though they were mere pawns in the game, to be moved lightly here or there.

Michelangelo wanted to be an artist: from his earliest days in school he neglected everything to be busy with his pen. Yet his father and uncles, far from welcoming his interest as a direct gift from Heaven, "beat him cruelly, for they hated the profession of artist, and, in their ignorance of the nobility of art, it seemed a disgrace to have one in the house."

John Adams's father tried by main force to settle the boy at a cobbler's bench for life.

Handel's father despised music and would not have a musical instrument in the house.

Tennyson's grandfather, tossing the lad ten shillings for an elegy on his grandmother, remarked: "There, that's the first money you ever earned by your poetry, and, take my word for it, it will be the last."

When Lowell's father learned that his son had won the prize offered by Harvard University for the finest poem written by an undergraduate, he received the news in sorrow.

"I had hoped," he said sadly, "that under the steadying influence of college James would become less flighty."

Lowell spoke out of the depths of personal experience when he wrote:

"It is the vain endeavor to make ourselves what we are not that has strewn history with so many broken purposes and lives left in the rough."

Not all fathers, by any means, have been shortsighted. A great majority, fortunately for the world, have considered the selection of the right career by their sons as the most important problem of their lives.

The business world is full of kindly, big-visioned men who have given time and thought, not merely to guiding their own sons' careers, but also to setting the feet of other men's sons on the path of success.

There can be no more satisfactory employment. No man could have a finer epitaph than this: "He was the friend and helper of young men."

Organizations fail, stocks prove worthless, the most carefully made investments too often leak away. But a young life fitted into its proper place in the world is an investment whose power goes on through the years, and even into eternity.

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Your Share in Reconstruction

By William Almon Wolff

THE war's over! Great, isn't it? It was wonderful to hang out the flag, and join in a procession, and cheer like mad, and sing the "Star-Spangled Banner" and celebrate generally. It is fine to see the boys come marching home, passing under victory arches and along streets crowded with people cheering them, and hung with flags. It's all splendid and inspiring—the greatest thing this generation's ever seen. Makes you think of Civil War days—doesn't it?—and the great parade down Pennsylvania Avenue in Washington.

The war's over! Ye-e-es, it's over.

It's over for you and me and all of us who didn't get into the service. It's over for hundreds of thousands of boys who, thank God, did get into uniform and weren't hurt. It's over for a good many thousands who made the final sacrifice, who rest in the peace of the fulfillment of their utmost duty.

But how about the man who is back from France with a bandage about his sightless eyes, with an arm or a leg or a foot gone, with a permanent limp, with a stiffened shoulder that will never let him forget the bullet or the bit of shell that dropped him? How about the man who was gassed so that he must always be careful lest an embolism kill him? How about the boy with a lesion of the heart that closes to him every path of work that was once open before him? What of the man who came back with consumption? Is the war over for them?

No! And it won't be over until the last man it has smashed and maimed has beaten it—until he has risen above personal disaster and proved, with the help his country stands ready to give him, that he can carry on.

He can do it. If he can move, if his mind can function, he can beat this war that has put him down, can emerge victorious from the struggle that, for him, has been prolonged beyond the day of victorious parade and waving flags. He may be blind; he may be without hands and feet—still he can win.

Do you know such a boy? Can you reach him by your influence, your advice, your suggestion? If so, it's for you to help give that boy the will to conquer, to go on fighting against odds greater than any he ever faced in France, great though those may have been.

Go back to the Civil War. You have to go back that far to match the outpouring of the youth of America that came with the war we have just won. And you have to go back to it to match the tragic aftermath. Then, as now, young men went to their homes crippled, broken, blinded, worn by disease. And a grateful country recognized its obligations to the men who had suffered in its behalf.

But then there was little understanding, little imagination, to go with the abundance of good will. Pensions were provided—oh, yes! Doles of money were handed out—to a staggering total. But to what end?

Those broken men had no future. They had their tiny pensions. They could do nothing for themselves. Some—and God knows no one can blame them!—simply drifted into dependence upon their families or their friends.

It wasn't their fault that things went so with them. What could they do? Their old work was closed to them by their disabilities. They started bravely enough, many of them, to make the best of a bad job. Because they were old soldiers they found work that they could do, or work they couldn't do very well. After a time

the competition of strong, well men drove them out. They were discouraged; they drifted; they followed the easiest path. Oh, there are any number of explanations; but explanations do not alter the picture, nor do they make it less painful to regard.

Now, this is 1919, not 1866. And here is the point for that victim of a German bullet who has still to fight his hardest fight: *No man disabled in this war need be dependent upon anyone except himself.*

There are to be no pensions growing out

of this war. Any man injured or sick as the result of his service will receive, if he asks for it, *compensation*. Compensation, no matter how long it may continue, isn't a pension. Don't let anyone tell you it is. It's a scientific award exactly like the award a workman injured in a factory receives in the States that have workmen's compensation laws. It is based upon the victim's pay, his dependents, and his earning capacity.

You know about that, probably, but it's important for you to keep it in mind. If your particular soldier was paying an insurance premium, that has nothing to do with his compensation, which is for injuries, and costs him nothing. He gets compensation, because no employer has the right to ask a man to take risks that may unfit him for the future earning of his livelihood without providing for that livelihood if he is hurt. The Government in that regard is in exactly the same position as a factory owner whose employees have to work with dangerous machines.

The war insurance that soldiers and sailors could carry, up to \$10,000, is entirely different. Commercial insurance companies, basing premiums on probable payments, had to charge a man who meant to assume the risks of war a very heavy premium. The Government insured him at the peace rate. That was common fairness if pensions weren't to be paid.

In connection with this insurance it is interesting to note that the Government plans to continue it for the men of its world-war armies as long as they live. Uncle Sam is in the insurance business to stay, and men back from the war can have the benefit of government insurance up to \$10,000 all their lives, regardless of their physical condition. No new medical examination is required. So you might also tell your soldier to pay his insurance premium and keep his cheap government policy. You can get complete information about this plan by writing to the Bureau of War Risk Insurance, Treasury Department, Washington, D. C.

Well, then, there aren't to be pensions. Disabled men are to receive compensation—enough to keep them going. If a man is entirely helpless he gets \$100 a month. If he is totally disabled, but not helpless, he gets \$30 a month; \$45 if he's married, and \$10 a month for each child, up to three children. That compensation isn't a pension: it's a part of the payment to which he's entitled under the contract he made with an employer who hired him for an extra-hazardous job. A pension is a gift; compensation isn't.

Now, the disabled man can take his compensation allowance and make out, after a fashion, to live on it. He can eke it out as the Civil War veteran of the unhappier sort eked out his pension. But he needn't. And shouldn't. Something a lot better is open to him.

All soldiers don't know about the chance they have to get training. Sometimes a man will be discharged as cured, only to discover, when he tries to go back to his own work, that he is no longer fit for it. Sometimes he succumbs to the lure of high, temporary wages, and then finds out that he can't compete with strong, husky rivals.

If you know a man who has been disabled in the war, or who has contracted some disease that interferes with his ability to work, try to make him get in touch with the Federal Board for Vocational Education. You will find, elsewhere in this issue, a list of the district [CONTINUED ON PAGE 50]



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Don't worry about these boys. They're just waiting for arms and legs, and when they get them, with the training they've had, they'll come back and give a lot of able-bodied men cards and spades in this game of life. They could drive tractors if they took a notion

Introducing Mrs. Pawnee Bill, Ranchwoman

By Robert H. Moulton

JUST outside the town of Pawnee, Oklahoma, lies a great ranch over whose thousands of acres roam great herds of cattle, mules, goats, horses, and probably the largest drove of American buffaloes in the world. From a central station in the ranchhouse run telephone wires to all parts of the great farm, and by means of them the working staff of some two hundred and fifty is controlled.

The directing genius of this place, the affairs of which are systematized precisely as are those of a metropolitan department store, is a woman. She is the wife of the owner, Major Gordon W. Lillie, better known as "Pawnee Bill."

To Mrs. Lillie there is nothing extraordinary in the fact that such a monumental enterprise should be managed by a woman. She would be more surprised than anybody else to be told that her position is unique.

Nor is there anything unusual about it in the minds of the two hundred and fifty employees. From foreman and cowboy down to stable hand they are accustomed to taking orders from her, and to finding that her orders are just about the right thing. Why shouldn't she command them? There is not one of them who knows more, if as much, about how buffaloes should be bred and handled. None knows better than she which yearling steers are ready for the market, which should be left on grass a while longer, and which should be placed on dry feed. She can tell any of them which way to mend a fence or build a shed or buy a carload of supplies.

The business methods employed on the Lillie ranch are right up to the minute. The mistress, from her desk, reaches for a telephone and tells her own private operator to connect her with a certain stable or tenant house. In a moment she is getting over the phone a carefully prepared report as to how some special work is progressing.

She hangs up the telephone and reaches for the ticker tape—this ranch has a ticker, just as any broker's office would. It in-

forms her that medium-weight grass cattle are going up on the market. She determines immediately that the rise will continue past the next day. Back she goes to the telephone again. She gets one station and gives orders for a certain number of steers to be rounded up at once. Then she telephones to the railroad station at Pawnee for cars to be put in readiness. Other directions hurry a sufficient force of men to the place of work. In the briefest imaginable time the cattle are on their way to the Oklahoma City or, possibly, the Chicago, Kansas City, or St. Louis stockyards.

The most remarkable thing about this ranch, however, is the big herd of buffaloes. They represent an ambition of Major Lillie to preserve for posterity this typical animal which was rapidly being hunted out of existence.

In the fall of 1879 Major Lillie decided to get stock for the foundation of a herd. He returned from the expedition with four young buffaloes. To these he added others as he could get them.



Photograph by Robert H. Moulton, Chicago

She used to be America's champion horsewoman, too

He had on his own ranch 10,000 acres of well-watered land over which the herd could roam. By careful attention to breeding and selection he found that his herd was growing rapidly. To-day he has something over two hundred pure-blood, fine-coated beasts. Mrs. Lillie early became particularly interested in this branch of the work. It is her opinion that there is great profit in buffalo-raising for the future. She is even hopeful that several ranchers can be induced to go together into the business of raising them. By furnishing a range of 20,000 to 25,000 acres, she believes sufficient range would be provided.

She believes that a plentiful supply of buffaloes would help diminish the cost of living. Their meat is edible, even preferred by some. She believes, with others, that a successful cross between them and beef cattle will yet be obtained, and that this will be a thing of the highest commercial importance.

The big ranch is well equipped in buildings. The ranchhouse was built at a cost of

\$100,000, exclusive of the value of the land. In addition, there are six barns and a workshop, where all the implements used on the place can be repaired or replaced. There are four large division ranchhouses for the tenants. The place even has its own hospital, where all sick or injured persons of the community are cared for.

The principal business of the ranch, of course, is raising cattle. Outside the buffalo ranges, the fields are dotted with thousands of cows and steers, most of them of improved breeds, but many of them still showing the long horns of the old plains.

SINCE the first estimates of the mortality from influenza in the United States in the 1918 epidemic were given out, there has been a continuous tendency to put both the deaths and the losses to the life-insurance companies from this source at higher and higher figures. The persistence of the disease after its maximum virulence was supposed to have been reached, and the accumulation of more complete data with regard to the deaths resulting from it all over the country, have been responsible for this constant raising of the estimates made by actuaries and statisticians. An example of such higher figures is to be found in a note in the "Agents' Record," published by The Travelers Insurance Company. The note states:

After making all allowances, actuaries are pretty well agreed that deaths caused by the epidemic will have reached 500,000 by the first of the year, and that the cost to life-insurance companies will reach \$110,000,000. Calculations based either on the ratio of deaths among the insured or on known losses of individual companies tend to support these figures.

The average age of death among insurance policyholders is said to be about fifty-five. The average age of the 500,000 people who died from the direct or indirect effects of the influenza epidemic was about thirty years. A surprising fact is that on at least one fourth of the life-insurance policies of influenza victims not more than two annual premiums had been paid.—*Economic World*.

Does Your Farming Ever Take You Back to School?

By James H. Collins

Illustration by Jessie Gillespie

WHEN red apples in boxes began to come from the Pacific Northwest a dozen odd years ago, two points made them different from other apples—they were redder than red apples had ever been before, and they seemed to grow in exact sizes, so many to the box, a great advantage in displaying and selling the fruit. Extra redness was due to the favorable climate; but uniformity of size was something learned in school by the Northwestern apple packers.

A few enterprising apple growers developed the system of putting in a box apples of one size, accurately counted, packed in tiers. That was a great business advantage, and as apple orchards increased in Oregon and Washington it became necessary to keep the packing uniform. To provide sufficient packers, a regular school was opened, where in about two weeks any intelligent man or woman could acquire the art. Pupils began by learning to handle apples as carefully as eggs, then to size them by putting apples through holes in a board, then to size by the eye alone, and to separate according to color and blemishes; and from that they went on to packing the boxes, so many apples in each tier.

The quality of Western red apples has been maintained against many difficulties, such as labor shortage, increase of crop, and the coming into bearing of new orchards, all through this simple system of sending apple packers to school to learn the trade right.

"Back to school!" is the solution nowadays for many a man's difficulty.

Is work badly done or too costly? Is there trouble in getting competent employees? Good managers turn to teaching as the best and shortest way out of such difficulties, and so you will find all sorts of schools, classes, and courses of study tacked on to the business and agricultural world.

Did you hear something about a coal shortage during the war? In many parts of the country it attracted rather wide attention, and all sorts of remedies were proposed. Down at the very bottom of this national problem, however, there lies a need for learning. Back to the schoolroom

for about a quarter of a million firemen, who shovel 60 per cent of our total coal output under steam boilers—and waste 40 per cent of it, or \$200,000,000 worth, through careless firing, which results in unburnt coal running away with the ashes. One week in a regular fireman's school, systematic instruction in good methods, with all the technical whys and wherefores of skillful firing made plain, would prevent much of this waste.

In some lines of business the school idea has been worked-out to such a degree that employees go back to school again and again, as they need tuition to keep their work up to high standards or to demonstrate their capability of holding better jobs.

The telephone business is an instance of this. Before an operator is permitted to answer your call with her brisk "Number, please?" she spends several weeks in a school equipped exactly like a big telephone exchange, with dummy switchboards, and circuits running to instruction desks, from which all manner of test calls are given pupils. She learns how to handle every kind of call, and takes a course in the geography of the city and State, and is even coached for clear speaking in a pleasant voice. When she goes to work as a regular operator, she is supervised; and if

any falling off appears in her methods she is sent back to school for a few days and again coached up to standard. If it appears that she would make a capable supervisor, she may be sent to another school, where she learns how to manage operators; and if this work ultimately indicates that she might make a chief operator, back to another school again to learn that!

Before the war we used to import waiters from Europe. They came out of a famous school in Switzerland, where the value of teaching the right ways of doing that work were realized years ago. War not only cut off our imports of trained waiters, but has taken thousands back to Europe to fight. This shortage was keenly felt, and the hotel men of New York met the difficulty through teaching—they now have their own school for waiters, where employees can be sent for a systematic course in work that looks easy, but that has more technicalities and angles than some professions.

Teaching is simply explanation, and work of all kinds involves so much explanation that in the end, after every other plan has been tried, the idea of a separate school or classroom has been found best, instead of turning people loose in a big organization, or on a big farm, and letting them pick up knowledge haphazardly,

with perhaps nobody to explain things.

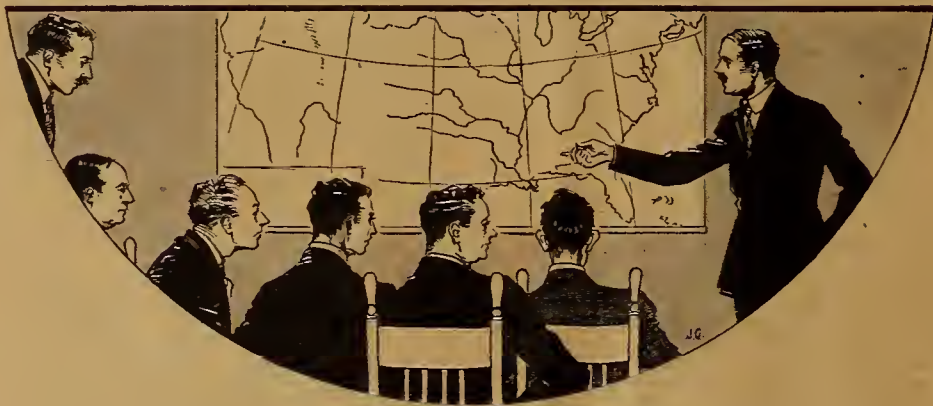
The teaching method has been found effective not only for employees but in many cases as a good basis for selling.

For instance, in selling its cash registers to small merchants a large concern found that time could be saved and more sales made if the prospective customer could be sent to school. At each of its branch salesrooms a series of dummy stores was installed. There was a tiny grocery store, with a counter, shelves, merchandise, and cash register; and next to it a dummy butcher shop; and next to that a model drug store. Having brought his prospective customer to a point where he was willing to spend an hour investigating the cash register as a device that might save him time and money, the salesman invited Mr. Grocer or Mr. Druggist to the branch salesroom, asked him to step behind the counter in the dummy grocery or pharmacy, showed him how to ring up different kinds of transactions on the cash register, while he acted as his customer.

"Three cans of tomatoes and a pound of cheese," he ordered.

The pupil reached back into familiar shelves for the goods, and rang them up on the register on his own prices. Then followed cash sales, payments of bills, the making of change, the paying out of money for goods or wages, the demonstration of sales and charges by different clerks, and so forth. Most pupils graduated from this school within an hour; or, by the orderly arrangements for clear explanation which it made possible, not more than an hour was required to demonstrate the basic economies of the cash register.

This idea applies to the farmer too. If you feel the need of specialized knowledge about any branch of your farm work, the nearest agricultural college would welcome you, no matter what your age, to its courses. In some States short courses are supplied by state colleges to the farmer right on his place. Then there are the county agent and the agricultural bulletins. A man is just as old as his desire to learn and progress is strong. The man who never gets tired of learning something new never gets old.



What I Did When I Lost \$130,000 Farming

The story of a man who had the courage of his convictions despite financial ruin
and the neighbors who said he couldn't succeed

By Ed C. Lasater

I HAVE been asked by FARM AND FIRE-SIDE to tell the story of my business life. If it will serve any good purpose in stimulating other and younger men to harder work, I shall be well repaid. When a man passes the half-century mark, as I did some time ago, he owes it to other men to philosophize a bit—provided, of course, he does not carry it too far.

Twenty-five years ago I lost all I had, and something more. Since that time I have handled probably 250,000 head of cattle, to say nothing of horses, hogs, and sheep. Since that time I have acquired about 350,000 acres of land the products from which prove it the equal of the famed blue-grass land of Kentucky for stock purposes.

I was born in Texas, a child of the prairies. My father was a ranchman. He had moved to Texas before the Civil War, before the days of big things as we know them now; in the days of the black slave and the open range. He made a business of breeding horses and mules on the open range. From 1,000 to 2,000 head was the usual number carried. Then came the war and revolutionized everything in the South, wiping out the old order as though it had never existed, creating new opportunities of which no man had ever dreamed.

After the war my father cashed in what was left and went into the mercantile business at Goliad. Goliad is across the San Antonio River from where the famous battle of La Bahia was fought, and the massacre of Fannin's men took place. My boyhood was thrilled with stories of the Texas fight for independence. I roamed over historic ground, the spirit of freedom was in the air—boundless, buoyant freedom.

Wanted to Be a Lawyer

My ambition was to be a lawyer. With the enthusiasm and exuberance of youth I dreamed of being the first lawyer in the land. My father was dubious, but he did not shatter my dreams completely. He hinted that perhaps I was not strong enough to lay the entire legal world at my feet; he suggested a year on the ranch so that I might build up my physique, promising that I could go to college the following year. His health was failing, and when the first year was ended he suggested another year of roughing it for me, until we could see what fate held in store for him. He had gone into the sheep business, and we had great hopes for it. Still the law seemed to beckon me; I yearned for college life.

That was not to be, however. Father's failing health had reached such a stage that I was called upon to look after his sheep venture. My associates were Mexican shepherds, they being the labor supply for that section. I know of no better shepherds than the Mexican, the Scotchman not excepted. The control they can acquire over a flock of sheep is remarkable. I felt as though I were losing out on everything I desired most in life. I could think of nothing, at first, but the brilliant career at the bar, earned before it ever began. I was disappointed, and have often regretted the fate that led me from the path which I longed to follow. But it took me out into the open, under the stars, where I had time to think, to study nature, and reflect on the problems of the day. Instead of finishing my education at college, my final degrees were taken in various camps between the Rio Grande and the Kansas line. I was studying those rich grazing lands of Texas, laying the foundations for the work I was to do later, but of which I hardly even dreamed then. Success can be built only upon a thorough knowledge of the business you are trying to succeed with.

Father tackled the sheep business in 1878. Prices were high then, and continued so for years. Wool was selling at 30 cents a pound, sheep proportionately. Then came the congressional election in 1890, when the Republicans, who had passed the McKinley Bill, were terribly defeated, and the Presidential election of 1892, in which the tariff was the principal issue. In 1894 the Democrats passed the Wilson Bill, which put wool on the free list. The Boston Wool Industry had placed the sheep business in a condition



Lasater and one of his dairy queens

that made surviving the stroke impossible. Sheep which had been bought for several dollars a head were sold on the Chicago market for 60 cents. Wool values would not pay for herding. The industry passed off the stage, discredited, bankrupt.

We had been seeing the handwriting on the wall for some time, and I had launched into the cattle business, on a speculative basis, a few years before the crash came. I have always tried to look ahead, and I find that it pays. All the time I had been following sheep I had been studying the range; I had come to the conclusion that the same grazing which had made sheep profitable in the old days would suffice for cattle. I had great faith in the land, in its future. I contracted for the entire output of various ranches, and shipped cattle as far north as Chicago in the early nineties. It is of interest to note how the market changed with the passing years. In later years I rarely ever shipped north of St. Louis. Of recent years I have sent less and less stuff north of Fort Worth.

I was handling cattle in a big way in 1893, the year of the financial panic. That was the very year I had chosen to become ambitious. I was determined to make a fortune. I could see no use in postponing the matter or in taking a number of years to do it; I proposed to

record. Fat steers sold for \$2.70 a hundred pounds in January of that year on the Chicago market. The result was that I lost all I had, and something more. I did a business that year of about \$800,000; I lost about \$130,000. But the man who lets failure discourage him doesn't deserve to succeed. I went back at it hammer and tongs.

It was rather a dark prospect for a young man who had longed to be the nation's greatest lawyer, who had determined to make a fortune in one year, and who had seen both of his dreams rudely shattered into bits. While disappointed, I was not discouraged: I had the best of assets left—a good credit. Whatever I possess to-day was built out of that failure. I turned bad luck into good luck by keeping everlastingly on the job, in season and out of season. I made my work a delight, never forgetting to look after the details.

I succeeded in protecting my paper, in protecting all my cattle contracts. I took the stuff I had contracted for, paid for it, and did the best I could. I still had faith in the country. Never lose faith in the land so long as you are willing to work. I knew the range was there; I felt sure the opportunity was there. That same dry weather, and those same low prices which had



He Didn't Know

IN THAT little oval up there is the picture of Ed C. Lasater of Falfurrias, Texas. He feeds \$10,000,000 worth of cattle on 350,000 acres of land. He is famous throughout the world for what he has done. Here, for the first time, he tells the story of how he did it. And the sum and substance of the whole thing is that he accomplished things because he never knew when he was licked.

Not so many years ago he was poorer than the poorest. In fact, he was \$130,000 in debt. He had lost everything he had in the same business he is handling millions of dollars in to-day. What he says about himself can be applied to you, or to me, or to any man. The fundamental principles on which he worked—determination, self-confidence, resourcefulness, investigation—are free to all of us. THE EDITOR.

He Was Licked

make a fortune right then. You know the old adage: "Man proposes, but God disposes." It held true in my case. In January and February of that year I contracted for something like 26,000 to 28,000 head of cattle. The recurring dry spell struck me, so that the cattle did not finish on the range as I had planned. In June the panic struck the country. The bottom fell out of the cattle business; my plans were shot to smithereens. Instead of disposing of the cattle, quickly and profitably, as I had planned, I was obliged to feed a number of them through the winter at great expense. The spring of '94 saw the lowest market on

broken me, likewise broke the ranchers in the country all around me. I could not ask for sympathy because misfortune had singled me out for its attack: it had visited all impartially. It had wrought havoc in the ranches south of me, in that country secured by its Mexican owners through grants from the Spanish and Mexican Governments, dating from 1800 to 1820 for the most part, years before Texas declared itself independent and left the mother country.

That year proved to be the hardest those ranch owners had ever experienced, the conditions the worst they had ever con-

tended with. The cry everywhere was for water. Stock died for want of it; drought and panic laid low the once fair land. The trouble came about largely through the inefficient Mexican methods. The grantees had depended for almost a century upon shallow wells, which were no more than surface trenches 10 or 12 feet deep, from which water was pumped or lifted by means of long poles and buckets. In 1893 the wells failed, the ranchmen lost cattle by the thousands; with a shrug they would say, "It is the will of God." That's the way some people have of saying that they don't care to struggle with difficulties.

Now, in a way, those Mexican grantees were no worse off than I was. I had one thing, however, which they did not have: confidence in my ability to provide a water supply. I canvassed the situation and came to the conclusion that the English companies, from whom the Mexican ranchers had secured loans, would want somebody to use these lands who could make them productive. I was confident I could do it. I had executive ability; certainly I knew the country, and had faith in it. Faith in myself has helped me to do a lot of seemingly impossible things.

The result was that with the backing of several bankers, who had confidence in me and my ability, principally because I had confidence in myself and would work, I was able to re-engage in business. I contracted for between 25,000 and 30,000 head of cattle in the fall of 1894, to be delivered to me in the spring of '95. At the same time I began to buy up the country of the descendants of the old Spanish and Mexican grantees—making small payments down, the loan companies carrying the balance—to lease up other land, to fence it, and to secure the necessary water. I soon found out that I could go into the old trench wells of the Mexican grantees and, by sinking the well 60 feet or so deeper, secure a supply of water sufficient to feed a four-inch pump, which was enough water for all the cattle that could graze thereabout. The water had been there all the time, only the inefficient methods had failed to produce it when it was so sadly needed. Lots of things that we want and never get are lying right around us if we will only look for them.

Lost Everything but His Nerve

In effect, then, I set about to build up a fortune out of the ruins of panic and misfortune. I had lost every cent I possessed, and some \$130,000 more. I staked everything on a still greater venture. I laid the foundations then for the Falfurrias Ranch of to-day, with its 350,000 acres. I bought great tracts, paying \$1 to \$1.50 an acre—25 cents down, and time on the balance. I had faith in myself and in the land, and eventually I won out. In the last twenty years I suppose I have handled 250,000 head of cattle. I have seen many changes come over the State and the nation, but never for one instant have I regretted the decision to build a still larger edifice on the ruins of the old one. In this instance success meant "doing many little things well." And the moral of it all is this: What I have done other men can do. I did not exhaust all the possibilities, by any means.

This brings me around to another chapter of my life story. Just as I graduated from sheep to beef cattle, so of recent years I have graduated into the dairy business, which is now my particular pet and pride. In it I see the early upbuilding of southern Texas as man never dreamed possible a few years ago.

The history of the development of all new lands heretofore has been this: Three generations have been required to open them to permanent settlement. The first generation has struggled to obtain a foothold, and has almost invariably been obliged to give up, to go back to the wife's kinfolks. The second generation has carried on the dream of the first, handing down legends of the new land just over the horizon. The third generation has been the one to obtain the permanent foothold, to bring the land under real cultivation. This was the story of the development of as good a State as [CONTINUED ON PAGE 28]

Mrs. Murphy and the Princess

With the secret of a lady of the royal blood to boost her, she hopes to scale the ladder of society in record time

By Ray Unger

MRS. MURPHY didn't mean to, but she couldn't avoid reading it. Mrs. Terry didn't notice her standing close behind on the dock when she indiscreetly unfolded the wireless message, evidently to refresh her memory. On digesting its contents she tore it into tiny bits and thrust the pieces into her handbag. A smile played on her lips.

The dock was crowded with fashionably dressed women attracted by the newspaper announcement of the arrival of the Chido Maru with a notable passenger. The Princess Athena of Tenravia was coming. Mrs. Terry was there to meet her.

Lorgnettes were in evidence as the women passengers were eagerly scanned by the waiting crowd. Two well-bred, quietly dressed women descended the gangplank. As Mrs. Terry caught sight of them, with both hands extended she made a quiet, forward movement.

Instantly the attention of the swarming women became fixed. "The princess and her maid!" the whisper passed through the crowd.

Only Mrs. Murphy, who was watching closely, saw a signal from the second passenger to Mrs. Terry, who hesitated a moment and then saluted the first lady respectfully. Her companion remained quietly in the background, unnoticed except by Mrs. Murphy.

"Your Highness," remarked Mrs. Terry, "I am proud to welcome you on American soil."

"You are most kind," answered the princess, with a slightly foreign accent. "I shall be at your disposal as soon as I have looked after two of my countrywomen. They know no one in this land. I should like to feel that they are in safe hands before I leave."

"We can place them in charge of the Travelers' Aid Society," answered Mrs. Terry.

The onlookers cast admiring glances at the princess, whose interest in her lowly compatriots proved her true nobility of soul. They were much impressed.

"Blood will tell," whispered Mrs. Rutherford Higgs as the Princess Athena spoke to two forlorn young women in peasant costume.

They curtsied and kissed her hand in a foreign fashion when she placed them under the protection of the kindly woman whose duties prepared her for just such emergencies.

Unexpectedly Mrs. Terry turned to the watching women, saying graciously, "I should like you to meet the Princess Athena."

Instantly there was a preening and a fluttering.

"Is my hat on straight?"

"I look a perfect fright!"

"My hair is blown to pieces!"

There were surreptitious glances into pocket mirrors, powder puffs and rouge sticks were mysteriously brought forth, and there were little pats on hair that accomplished nothing but a revelation to the onlookers of the mental processes that prompted them.

Only Mrs. Murphy did not flutter. With dignity she bowed in acknowledgment of Mrs. Terry's introduction. She then dropped behind the babbling crowd and walked beside the maid, talking pleasantly to her.

The maid was a dainty little blonde, not a whit less attractive nor refined than her mistress. But for Mrs. Murphy's kindness to her she was utterly ignored.

"I know you'll be lonesome while your mistress is being entertained. I'm going to have you at my home whenever she doesn't need you." Thus spoke the kindly Mrs. Murphy. Drawing her away from the crowd, she shook her finger mischievously, whispering archly: "You can't fool me, Princess. I knew you the minute I seen you."

The girl looked in wonder at the woman. Mrs. Murphy continued: "You'll have to get up pretty early to fool me. I seen your message to Mrs. Terry. I know you're the real princess. You can trust me. I'll keep your secret."

The girl laughed a low, rippling laugh and conceded: "Well, you are clever! There's no use denying my identity to one of your discernment." Anxiously turning to the woman, she entreated: "You'll be sure to keep my secret from these other women?"

"Well, I should say so! Except for my husband and son, I swear to goodness nobody'll know."

Mrs. Murphy was in the seventh heaven of delight. By a mere accident she had possessed herself of this astonishing information. To think of her sharing a secret with a princess of the royal blood!

Her wealth and an eligible son had made the necessary opening. With these aids her arch-supported, silk-stockinged, expensively shod feet were making a gallant fight to climb the social ladder. She had attained several rungs in spite of the pushing, jostling throng who were endeavoring to make the same ascent.

By dint of untiring research and inexhaustible cultivation, she had become an adept in the choice of specialists—specialists who added to or concealed her list of native charms, as the case might be. In consequence her much-corseted, much-manicured, much-complexioned, and much-

their own stone mansion on a height overlooking the bay.

As Mrs. Murphy returned home she was almost bursting with her discovery. She was the only one in the city to detect the identity of the real princess. What a joke! She must tell Tim. In her enjoyment of the situation she forgot everything else.

She found Tim where he most loved to be—in his den. Here, without fear of discovery, he was able to throw off his acquired manner and lapse into the old Tim Murphy of the farm. Deportment was not the only thing he cast off. His coat, waistcoat, collar, necktie, and toupee made a little heap on the chair beside him. With old carpet slippers on his feet and an old clay pipe in his mouth, he was a picture of perfect contentment as he read his newspaper.

He looked up. He often put on his old brogue when he took off his new coat.

"Katie," he said, "I'm thinking wouldn't it be foiner for you and me to go down to the old shanty for a few days. Just you and me. You could do the house wor-r-k as in the ould days and I'd be afther a-doin' the chores. Them was happy days!" and he signed reminiscently.

She was good-natured and fond of him. At another time she would have acceded to his wishes—not gladly, but dutifully. It was the first time he had expressed a longing for the old life. But just now, with such a brilliant social coup within her grasp, how could she? She would not refuse his request, but would postpone the trip.

She told him of the arrival of the princess and her discovery.

"Oh, Tim, I was standing right by Mrs. Terry when she read her wireless message! I couldn't help seeing it." And she disclosed its contents. They were: "Greet maid as princess."

With an uproarious laugh, Tim jumped to his feet and lustily slapped Katie on the back. "You'll do, Katie, old girl! We'll show the swells what high society is! I'll back you against the lot of 'em."

Hospitality was extended to the princess with a show of magnificence rarely before seen in San Francisco. The culmination was Mrs. Katherine Arthur's peacock dinner dance. The hostess, in a jewel-studded, shimmering green-blue gown of marvelous diaphanous texture, received her guests in rooms whose walls were hung with iridescent green-blue of the filmiest, silkiest fabrics, studded with what appeared to be emeralds and diamonds. These draperies were lightly caught together with peacock feathers.

The dining table, with its gold plate and peacock-feather decorations, elicited murmurs or admiration from the guests. No flowers were used in the decorations. Delicate peacock-colored tulles trailed gracefully on the table, forming a harmonious background for the feathery ornamentation. Even the Bohemian glass was of the same marvelous coloring. The brilliant appearance of the scene left no question in one's mind of the decorator's rare talent for achieving splendid results in his work and for an exquisite conception of harmonious color and design.

The princess was queenly. She received the homage of the other guests with gracious friendliness, but just the touch of haughty dignity to be expected from one of her rank. She was a rare gem in a fit setting.

Mrs. Murphy chuckled inwardly at the slavish subservience of the great free American people. Not that she wouldn't be slavishly subservient had she not known the truth. But this she didn't realize. To her the situation was screamingly funny. Wouldn't she and Tim and the real princess have a laugh when she told them about it? And wouldn't these people feel cheap when the truth was brought home to them?

She approached Mrs. Terry, who, next to the princess, was the most important guest at the function. Mrs. Terry was aware of her secret knowledge of the true situation.

"Well, if it don't beat all how that maid carries herself! Look at Schuyler Van Brunt and all the others making fools of themselves over [CONTINUED ON PAGE 26]



Hand in hand they sat, as the brush that painted the glowing sunsets made an ineradicable background on their hearts

If you knew how, it wasn't such a task to get into society, after all.

Drawing the maid to one side, she begged: "Now, you'll come to my house? I want you to meet my son, Mountford." At the mere mention of his name she glowed with pride. "My boy's at the officers' training camp. He wants to go to the war. If I say it myself, there ain't a finer young man in the city. Besides," ingratiatingly, "it's so select to be connected with the army! I'll tell you what! Mountford and I'll call on you and—"

"Oh, but that wouldn't do at all!" interrupted the young woman. "Don't you see I am ostensibly Princess Athena's maid? My name is Olga—Olga Bernoff. For reasons which I am not at liberty to disclose I must remain Olga Bernoff for the present. I shall be glad to accept your hospitality when my mistress can dispense with my services." The mischievous twinkle in her eyes caused the older woman to laugh vociferously.

The pseudo-princess turned at the sound. "Olga!" she called peremptorily.

In Mrs. Murphy's social aspirations the need of culture had never seemed impera-

coiffured figure presented a seemingly undeniable efficiency in the struggle. Determination, backed by money, was getting results.

She was rich. She did not like to remember the time, only five years ago, when she and Tim and the boy had struggled to earn a bare existence on the unfertile farm.

Overnight had come wealth—wealth undreamed of; wealth that had made it possible to surround herself with every luxury; wealth that had made a college education for Mike—now Mountford—feasible. She still blinked in astonishment when her thoughts reverted to the old struggle against poverty, the gallant fight to keep the old shanty over their heads. They had not expected much in those days.

And the cause of the sudden change? Oil! A gushing well! It had met their astonished gaze one morning. It had brought hordes of promoters and capitalists as suppliants to the feet of the humble Murphys. No desire of theirs need remain unfulfilled. One week later found them in an expensive hotel in San Francisco, and a year later they were occupying

Let the Bees Build Your Bank Account

They work for nothing, are cheap, easy to get and to care for, and actually increase the crops they forage amongst

By Henry Irving Dodge

MY ATTENTION was arrested near the old Dunning mansion on James Street in Syracuse not long ago by the curious figure of a man working on a scaffolding close under the roof of the piazza. He was grotesquely accoutered in an old Panama hat and heavy veil which entirely surrounded his head and was tucked in at the collar.

In his hand he had what looked like an old-fashioned teapot with a long tin snout on it. From this, by some bellows contrivance attached, he was assiduously puffing awful black smoke into the crevices between the fluted pillar and the Corinthian cap which surmounted it. The man himself was no other than the noted apiarist Dr. C. G. Schamu, and he was smoking out bees from a long undetected hiding place. Some three hundred pounds of honey rewarded his enterprise.

While I hope particularly that this story may be of service to the men who come home disabled from "over there," being disabled is not essential to availing of the suggestions herein contained; nor being a soldier either, for that matter. The proposition is open to young, old, male or female, broke or rich.

"The open," unlike a good many other things, gives a man a chance to go into business for himself without any capital. It gives him a chance to capitalize himself physically, and morally as well. When children make artificial flowers, they die. When they "tend" natural flowers, or other things that grow out of doors, they live.

Very well then, let us consider bees as a means of putting a man on his feet—financially speaking.

Mrs. Bee is a much maligned insect. She is a doughty little defender of her rights where one seeks to violate those rights in any but an insinuating or seductive way. She is amenable to good treatment. I speak from experience. I never thought that I could be persuaded to go into an apiary, but my confidence in Dr. Schamu's promise that the bees wouldn't hurt me was such that I made the venture. Besides, I was heavily veiled. I almost stuck my nose into that big something pile of assiduous little insects and watched them doing wonderful things.

On the uncovering of the comb by the doctor, the queen bee, as it seemed to me, at once sought to hide herself by burrowing into the mass of workers, but the doctor told me that it was the workers who were endeavoring to do the hiding and the protecting of their queen.

The bees literally swarmed over me, on my coat and veil, and I had the unpleasant sensation that one or two had got on the inside of my arm, and was nervous about it. But the doctor reassured me. "Be quiet," said he; "don't make any sudden moves. Take your hands out of your pockets and let the workers crawl over them." I did so, which was a mighty good test of my confidence in the doctor's words. At once from fifteen to twenty workers—females, of course, with stings—investigated the backs of my hands, but finding nothing there that might be added to their store of sweetness departed. One, however, had sought to investigate the dark recesses of my coat sleeve, and when my cuff touched her she reminded me most poignantly of her presence. That was the only time I was stung. It didn't hurt much. Dr. Schamu was rather mirthful about it. But somehow James Whitcomb Riley's lines—

Yes, the bee stings—I confess it!
Sweet as honey—Heaven bless it!
Yet he be a sweeter singer
If he didn't have no stinger—

persisted in running through my head. "They don't sting you because they know you," I ventured.

"Nonsense!" said the doctor, gently burrowing with his forefinger into a seething mass of insects to discover another queen. "They don't know me any better than they know you. I am quiet and gentle with them, and I don't make any false moves. There are times," he continued,

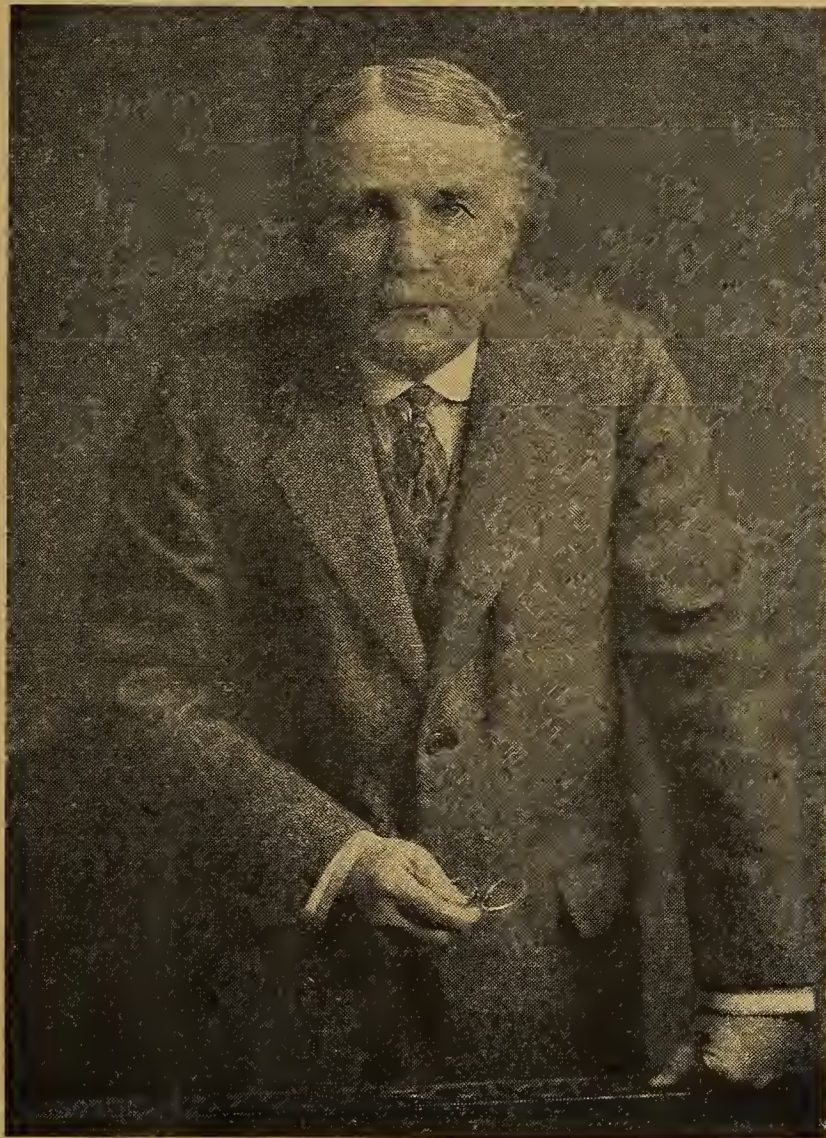


Photo from Ira I. Hills Studio This is Mr. Dodge himself

We All Have Shortcomings

THE poor bee's only shortcoming is its sting. That one thing has prejudiced the world against it almost to the exclusion of its many fine qualities for a long time. About all most of us know of bees is that they sting. It would be just as reasonable to condemn a first-class farmer as no good because he chewed tobacco.

The more discerning of us are beginning to overlook the bee's sting, and to discover that, with surprisingly little effort on our part, bees will pile up honey and money for us.

THE EDITOR.

"when a colony—meaning a hive—is in an irritable temper. Experience, alone, teaches us when such a condition obtains. And then it is wise to go slow." He picked up a large insect.

"Here," he said, "take this one. It's a drone; it has no sting." And I found myself handling the creature with as little fear as if it had been a housefly.

"Well, by jingo!" said I to the doctor later. "It seems like a pipe dream. If anybody had told me that I'd have been mixing in with that bunch of stingers to-day I should have told him he wasn't a good judge of human nature."

I am relating my personal experience with bees just to show that anyone, equally ignorant, may work among them with immunity simply by exercising a degree of common sense.

Let me disabuse your mind of another dread possibility: You don't have to live in the country in order to keep bees. You may live in any village or in the outskirts of most any town, and you need but a little patch of ground—a mere back-door yard—that is, to begin with. Don't worry about your bees' getting their food. They will attend to that end of it. They are the

busiest little food gatherers in the world. Nor are bees profiteers. It does not cost them any more to steal nectar from your neighbor's flowers than it did before the war. They won't sting you that way, at least. Also, you can take a sweet satisfaction in realizing that your stingy old enemy Griggs or Steel, who owns the clover field out yonder, is unconsciously contributing to your support. Griggs couldn't keep the bees away if he wanted to. Even if he caught them he would have to identify them. But don't let your conscience trouble you on that score, for your bees will pollinate the old man's clover and his apple blossoms, and the like, and make them bear double.

"It has been proved that an apple orchard with beehives near-by will produce twice as many apples," said Dr. Schamu. "And, as a matter of fact, the keeping of bees has doubled the income of my farm. Many persons have remarked on the amount of cherries I have there every year. This is due to the presence of bees."

The bee is as simple and direct in her method as Kipling's plagiarist: "What she thinks she may require, she goes and takes it."

Dr. Schamu advises pretty nearly everybody to go into beekeeping. Really, to hear him talk one would be convinced that it's a crime not to be a beekeeper. But why does he so advise? In the first place the demand for honey has increased enormously. The public would consume thousands of tons more a year than it does consume if we were able to produce it. There are not half enough bees to gather up the tons of sweetness that go to waste yearly in the clover fields one sees as he drives through the country. And the varied uses of honey have multiplied beyond the dreams of the beekeepers of ten years ago. Take the culinary end of it: We have, for instance, honey-and-nut sandwiches, honey bread, honey-and-nut-bran muffins, hard-honey cake, butter-honey cake, nut-honey cake, honey frosting, honey sponge cake, honey pound cake, honey fruit cake, yellow honey cake, honey cookies of various kinds, honey wafers, honey rissoles, baked honey custard, boiled honey custard, honey pudding, honey charlotte russe, honey mousse, honey ice cream. Also, honey enters into the preserving of strawberries, cranberries, apples, and the making of jelly. We even find it in salad dressing, fudge, caramels, and popcorn balls. And Dr. Schamu declares most emphatically that honey in coffee discounts sugar as cream does milk. To quote him:

"As a food value honey is unequalled, because it is a predigested food. One pound will equal, in calories, three pounds of beefsteak or three dozen eggs, the same pound of honey ranging from 25 to 35 cents, according to grade, while eggs average 60 cents a dozen, and beefsteak costs—I don't dare say. Also, honey is nowadays prescribed for various ailments. A man who suffers from diabetes, say, and who cannot eat any sugar at all, may consume all the golden liquid he chooses, without stint or limit."

People have ceased to regard honey from the standpoint of luxury as in former years. They regard it now as a staple food. The growing demand for it has put the price up higher than it has ever been before. For this reason it is easy for the producer to market his goods right in his own dooryard. All he has to do is to hang up a sign. Dr. Schamu told me of a man he ran across on the boulevard between Niagara Falls and Buffalo who had sold 10 tons of honey the last summer over and above what he produced himself, honey which he had purchased from other beekeepers. He kept it in glass quart jars, and sold the same at \$1 a jar right at the roadside.

Honey will keep forever. If it crystallizes it is a simple matter to liquidate it by heating, which process leaves it as clear as before and wholly uninjured.

In addition to the above reasons for going into beekeeping, Dr. Schamu claims that anybody of reasonable intelligence may engage in it. He particularly recommends it to disabled soldiers. A man, for instance, without legs and minus an arm may thus occupy himself, if he provides the right equipment in the way of modern hives and so forth. As a matter of fact, Mr. Herman Fairchild of Liverpool, New York, has taken care of his bees for the past three or four years in a wheeled chair.

A person may start raising bees with a capital of \$5. That is mighty slender capital. It is not recommended as practical. But it is possible. It would mean using the old-fashioned box hives, which would handicap the beekeeper at the start as against competition with his neighbor who uses modern hives.

A fair start would be ten modern hives, with bees complete, costing \$150.

Dr. Schamu, however, advises fewer colonies at the start. He says: "I would advise a young man after the war, particularly if he be disabled, to start in with four or five colonies—hives—and thus get acquainted with the bee and become immune to the poison. After a year one may work bare-handed among the insects as freely as though they were flies."

The old-fashioned box hive has been so improved upon that at the present time beekeeping is a pleasure—a pleasure for the reason that [CONTINUED ON PAGE 24]

They Won a Fortune from Worthless Land

Their faith in a strip of abandoned soil has added thousands of acres to the high-producing truck farms of America

By Allen Eddy

LOOKING at the hilltops and getting lonesome for the city didn't appeal to the Breese boys, Stewart and Ralph, when they took stock at the beginning of their careers. They looked into the valley at their feet and saw a challenge that set them to work with their hands and their brains, saved thousands of acres of waste land to themselves and their neighbors, and made them the celery kings of New York State.

Stewart was twenty and Ralph eighteen when their father, a produce commission merchant in Wayne County, died, leaving a small property. The two red-headed boys were the chief props upon which their Canadian mother must depend.

They looked at their feet, and saw black earth. They took counsel together, read and studied, and then rented—not leased—a little patch of "waste" land which had been of no use for a century at least, and, for aught anyone knows, since time began.

Local geologists say that in olden times that ground was the bottom of a lake. Be that as it may, it has been the bottom of a very substantial fortune for the Breese boys. They knew that it had the rich and rank deposits carried to it by the brooks from the hillsides, and they capitalized the knowledge and added their strength and faith to the total of their investment.

The result, season after season, has been prolific yields of onions, celery, and lettuce. That piece of black dirt, never before used, seemed intent on making up for lost time.

But it was not easy going. From dawn to dark, through that first summer, the mosquitoes worked above the black earth. At night the frogs croaked and the crickets chirruped as if in mockery. Weeds flourished, resisting any invasion of the area they had so long occupied unmolested.

One Crop of Celery—\$42,000

The boys were not daunted; they continued, confident that Nature was kind at heart, and that any ground that could grow such weeds and mature such mosquitoes, frogs, and crickets could be made to yield something worth while. But all the difficulties of July and August, when the sun warmed all their foes into concerted action, was nothing compared with their crowning disappointment—a small yield and low prices.

Even then they did not lose courage. The experience they had gained was added to their meager money profit in computing the total assets, and the next year they rented a larger piece of the waste land. The hard work of the previous year had counted to their advantage. The rank deposits had been cleared away. There were fewer mosquitoes, and those remaining seemed to be of smaller stature. The frogs and crickets were not so saucy. The ground was more pliable; indeed, there was a genuine pleasure in turning the soil—it was so rich and wholesome and fragrant.

More onions and more celery the second year. They tried Boston head lettuce, and found that it yielded handsomely. They kept at work with their heads as well as their hands, and improved their methods of tillage and their system of marketing. From their profits they purchased pieces of the ground.

The operations expanded season after season. The boys now own about all of the tract, which is a mile long and the width of a fair-sized New York State meadow. They bought other pieces of land of like character. Now, after ten years, although they have largely centered their efforts on celery, they grow onions also, following the crop rotation method, and to keep ahead in their warfare against weeds. This is made necessary, as in the celery fields horses are used for cultivating, whereas in the onion patches hands are necessary for the uprooting of the weeds. Last autumn they shipped more than 100 cars of celery, and the money return was about \$42,000. Their crop of onions was approximately 40,000 bushels.

In the last two years two serious problems have confronted the American farmer—the fertilizer question, and the scarcity of labor. When the cost of commercial fertilizer went up and the quality of it



Stewart and Ralph Breese standing beside a load of their prize celery

down, and it was hard to obtain under any circumstances, the Breese boys returned to the old method of fertilizing. They brought manure by the carload to their fields from the stockyards at Buffalo. When farmhands were hard to find, they looked about and learned of two families of Belgians, just from their native land. These men, women, and children have worked in the Breese vegetable fields ever since. Roomy, comfortable new houses were provided for them. The children work in the fields in the summer and attend the district school the rest of the year. Men, women, and children are well paid and contented, and show their appreciation of good treatment by their diligent, careful,

and intelligent labor. In this way the young farmers have not suffered as have others through a scarcity of farm labor. They anticipated the situation and were ready to meet it.

In addition to their own success, these boys have been pioneers and benefactors in the locality, for the elder generation looked on and saw what they were accomplishing. No one thereabouts previously had thought of raising celery for the big city markets. Muck fields were waste land, nothing more. Celery was just a little something to be grown in the kitchen gardens because the women-folks liked it for Sunday dinner. But the neighbors couldn't help seeing what the Breese

boys were accomplishing, and consequently the Breese boys revolutionized affairs in the vicinity.

Persons who live in western New York, whether on the fertile farms or in the numerous prosperous villages and cities, declare they are inhabitants of a favored country. The farms yield variously and abundantly, but excel with the products that go to the preserving factories and evaporators.

Each neighborhood has its king—sometimes he is a peach king, or an apple king, or a potato king. The Breese boys seem to share a throne as the celery kings.

The older farmers observe their methods closely, although some of them wouldn't admit the fact. However, almost every one of these splendid farms, with meadow, hill, valley, and woods, also has its "low piece," which not so many years ago was of no use, a breeding place for insect pests and a positive enemy to human health and personal comfort. Now these low pieces have become veritable garden spots; and as the new celery sends up its shoots of green, and as it develops day by day and the young green changes to a deeper hue, the farmers count their profits, which have the habit of never failing, and some of them—not all—bless the Breese boys who blazed the way. The "muck farmer" has become a distinct and highly prosperous local institution.

Their Fellow Farmers Prospered

At the railroad station, North Macedon, the New York Central has doubled its car-storage capacity for the handling of farm produce. At the near-by stations, Wayneport, Walworth, and Palmyra, shipments of farm produce have increased, and the prosperity of the muck farmer is shown also in the increase of business at the stations on the Lehigh to the south, Farmington and Manchester. And all of this is traceable, more or less, to the pioneering of the Breese boys.

These young men would scoff at the idea that they have discovered any shortcut to success. What they have accomplished has been the co-ordination of hard work, a fundamental knowledge of agriculture and soil properties, faith and persistence. They are not miracle workers; they are methodical plodders.

They are married and have interesting families. Their homes are centers of happiness and culture, music, good books, and the ambition to keep abreast with affairs. They have their summer homes on the shore of Lake Ontario. For them rural life is robbed of that bugaboo, loneliness.

Of course, their chief interest is business, but they are not always thinking in terms of celery and onions. They work together in all their enterprises, and always in harmony. They do not push themselves to the front—they don't have to—but usually they are there in every public effort. They help support their church and their lodge; they are promoters of good schools and local improvements, and all patriotic enterprises.

By the natural process of industrial evolution, the one local manufacturing plant, which formerly was Macedon's chief reason for existence, was swallowed up by a trust and carried away to Ohio. Folks round about said that it would kill the town. They didn't reckon on the Breese boys. The muck farmer has filled the void. The town is prosperous. It took its full quota of Liberty bonds; it oversubscribed to the Red Cross and other war funds.

The Standard Oil Company built a large oil tank at the railroad station, which is its distributing point for fifteen miles around. Quite a bit of the money that gets loose rolls around to the Breese boys. They have an up-to-date garage on the main line of travel between Syracuse and Rochester. They use it for general headquarters. They buy and sell all kinds of farm produce.

The Breese boys have provided a modern instance to prove the age-old proposition that nothing is created in vain, and that what in limited knowledge has been, or is, considered dross and waste, in the light of wisdom can be made available for the highest uses.

Packing Raspberries Right Fixed Him

By O. B. Gover

WHEN I landed in this piece of Maryland woodland, a grub ax and \$30 were my sole worldly possessions. But I had a will to succeed, and an idea.

In the first two years I cleared my land of trees, roots, and undergrowth, plowed deep, and harrowed. As with all new land, the soil lay in streaks, some of it very poor, some very good, most of it too acid to be healthful for cane fruits. I dragged the rich soil strips over the poorer stretches and mixed the poorer into the richer, adding a little lime as I went. When my foundation was good I set out my cane fruit, specializing mostly in raspberries.

To my mind there is no more delicate fruit flavor than well-raised raspberries—not the seedy, mushy variety one finds growing wild, but my variety. The usual raspberry has large, tough seed cells, a purplish color when ripe, and has no body. It crushes badly in the basket, so badly that the fruit is mushy before it gets to the fruit stands.

My berries, on the other hand, are a bright carmine color, have small, tender seed cells, good body, and stand up well for handling. When a basket is full it stays full, and there are no crushed berries in the bottom. The flavor is like the aroma of the sweetest flowers. Raspberries are like perfume to me.

At first I had a great deal of trouble keeping out the wild varieties from my patches. Then I had trouble with the



Gover is not as worried as he looks. He has just sold 150 baskets of raspberries at 35 cents each; an ordinary day's work for him.

pickers. It took me weeks to train them to make a clean pick. They persisted for a long time in allowing stems, buds, green berries, and even bugs to go into the baskets.

At last I succeeded by high wages and personal example in teaching the pickers to have a respect for the fruit as the most perfect in the world. Then my crop began to show up as I wished it.

High rounded quarts, with every berry perfect, without a stick or bud or other waste, began to bring me a much higher price than the mushy, wild, and badly picked berries on the market. I found that in my class of fruit there was no real competition. A basket of my berries required no work

from the cook, were ready to serve when sold, and actually did serve seven good breakfast helpings, while other kinds had to be picked over, were crushed and unattractive, and would serve only four people to the basket. I advertised this point on my sales route.

Soon I developed a trade which took, without haggling, every basket I could raise, and I practically named my own price. I now have about two acres in raspberry canes and have two crops a year, one in July and the other in October and November. This year my average yield for the early crop was 150 baskets a day; on the late crop, 40 baskets a day. In the first case I disposed of the crop at 35 cents the basket, and the late crop at 40 cents.

The Tramp Who Bought a Dairy Farm

Dropping off a freight at his home village one day, he determined to stay and make good right there. He did it

As told to Mary Quint Walker

TEN years ago I was a tramp. I stole rides on freight trains, begged my meals at back doors, and was arrested two or three times a month on the charge of vagrancy. Last week I purchased a \$10,000 farm, and an adjoining eighty for another \$5,000. In 1908 I was a disreputable hobo. Now I am a respectable citizen and, to quote from the local paper, "an authority on dairying."

This change came because I passed through the village of Mayson, my boyhood home, while taking one of my free rides, and out of idle curiosity dropped off. The quiet little place was just the same, but there must have been a difference in me, for nobody recognized Jack Drewe in the rough, unshaven man. I did not stay long in town, partly because of the unfriendly glances the marshal gave me, but strolled out in the country three miles to the old Drewe place.

My first memories were of this farm. When I was a little fellow of three or four, Grandpa Drewe would call for me and coax my mother to let "little Jack" come out for a visit. Poor old Grandpa! He was as fine a man as ever lived—a good farmer too, but he was unfortunate in his only child, my father. Perhaps my grandparents were too indulgent. I cannot say as to that; but I do know that he was shiftless and ungrateful, the village drunkard and an eyesore to the respectable little town. I dislike saying anything against mother, but I cannot tell this story without admitting that our home was not a pleasant place.

Grandpa Drewe tried his best to save us; he nearly supported the family, but it was no use. My parents seemed contented with their way of living, and, though they were willing to take money from the old folks, resented their advice. Even when Grandfather begged them to take the farm, thinking that it would be better for all of us, my father laughed and said that he would get the place some time anyway, and my mother absolutely refused to spend her life in the country. Owing to their liking for my grandparents, the townsfolk hired Father to do odd jobs of carpenter work, but finally he became so unreliable that he could not even get these.

A lump comes into my throat as I remember the heartbroken, hopeless expression in the eyes of Grandpa and Grandma Drewe. When I was about ten they died suddenly—killed in a runaway accident.

Father sold the farm as soon as he could, for about one fourth its value, and for a time we were prosperous. As the money went we sank lower and lower, and Father drank more and more, until at last, crazed with liquor, he put a bullet through his head. My brother Bill and I were the town toughs, and were constantly committing depredations; but when we robbed the village shoemaker of fifty dollars it was decided that matters had gone far enough, and I was sent to the Boys' Industrial School. Shortly after, my mother and Bill went West, and I have never seen them since. To-day I do not even know where they are. When I came out I followed the path of least resistance, and joined a crowd of hobos who were making their way to the coast. It seemed an easy, happy life, and, though at first I was a bit disgusted, I soon came to like it. And this brings me to the autumn day that, dirty and ragged, I dropped off the freight.

When I reached the farm I saw that they were threshing. As soon as I stopped at the gate I was approached by the owner of the machine, who said that they were short-handed and asked me if I did not want a job. At first I refused, but thinking of the bounteous dinner that would be set before the threshers I changed my mind. We rested for a while at noon, and I got in conversation with a young fellow of about my own age.

"Fine place!" I said, just to draw him out.

"It is!" he said enthusiastically. "The old Drewe place they call it, though a Drewe hasn't lived here for years—old Jack was the last."

farm outside the family?" I persisted, curious to hear his opinion of my father.

"No," impatiently. "He left it to his son Jack, all right, but the fool went through it, and then killed himself. The rest of the family moved away, and everybody was glad to see the worthless trash go. There was a young Jack Drewe, grandson of the old man's, and his favorite, but he turned out just like his father. Last I heard of him he was in a kind of reformatory."

"No, the last you heard of him he was threshing," I contradicted.

He took a good look at me and saw that I spoke the truth.

"Well, I don't take back a word of what I said," he answered stubbornly. "Old

but when fall came I thought it would be better to wait until spring before putting my plan into effect. Hard work and ambition had completely changed me: my muscles were like iron, and I was brimming over with enthusiasm. It seemed impossible that I ever could have been contented with the idle life of a tramp, but now I had an incentive to spur me on.

Whether to work in the woods or go on a farm that winter was a hard problem to decide. Wages were better in the woods, but I realized that I would learn more on a farm. An advertisement was answered, and I went to work doing chores on a dairy farm in southern Minnesota. The knowledge that I obtained was worth many times the \$30 that I received as wages. By April my savings had increased to \$500, and I was ready to start out.

I had intended to rent a place and invest my money in stock; but I learned that the Jones farm was for sale, and did not have much trouble making a deal with the owner, who was anxious to go to his daughter in California. It was a small run-down 40-acre farm with poor buildings, but—on the main road, and consisted of level, easily worked land. Mr. Jones agreed to let me have it for \$3,500—\$500 cash, the balance to be paid in yearly payments of \$300 or more. If I failed to make a payment the farm was to go back to him and I would lose what I had put in, but I was not afraid. Six cows, a pig, a dozen chickens, and an old team went with the property, also some tools and a dilapidated wagon. No king, I know, was ever so happy as I on that first night as I milked my own cows on my own farm.

I did not expect the people of Mayson and vicinity to welcome me with open arms, but neither did I expect to be turned down completely. I soon saw that I was an outcast—a pariah among the farmers and their families. When I took the milk to the factory in the morning the men wished me a cheery "good day," but that was as far as their friendliness ever went.

"The less you have to do with such scum the better," I overheard one neighbor say as he passed my home one evening, and I was not left in doubt as to whom he referred, for his companion answered:

"That is what I tell my boys. I say to 'em, 'Jack Drewe is a good young feller to let alone.'"

At first I occasionally attended a dance at Gilbert Hall, the Community Center, merely looking on. One evening I asked a girl to dance, but she refused at once, and with scorn in her voice. Knowing what I might expect, but determined to see just how I was regarded, I made several more attempts, which, needless to say, were unsuccessful. One little lass of seventeen informed me primly that she was not in the habit of dancing with jailbirds.

In town I saw that I was regarded with suspicion. The same spirit that made me ask the girls to dance urged me on to see just what the tradespeople thought of me, so I asked Mr. Franklin, the leading grocer, to charge a few things. He unhesitatingly told me that he did not give credit, though he knew that I had just seen him mark down the purchases of two customers before me. Returning later for a forgotten parcel I heard Mr. Franklin saying indignantly, "Now, wasn't that just like his cheat of a father?"

After this I [CONTINUED ON PAGE 46]



It Makes No Difference What Your Name Is

WE ONCE knew a man named Smith. He later became Smyth. Still later he made it Smythe. Now Smith imagined that each time he added a flourish to his identification tag he elevated himself a little. But he didn't. He merely made himself more ridiculous.

The spelling of your name has nothing to do with what you are. Some people can't realize this. But it's true. A man named Axhandle stands just as good a chance as a man named Edison or Gary.

On another page we publish the story of a man who failed for \$130,000 in the cattle business, but came back and made a fortune because his *credit* was good. He had a good name. On this page is the story of a man whose credit was not good. He had a bad name. He made it good by changing his record.

If your record is good, your name is good. If your record is bad, your name is bad. And using the whole blamed alphabet won't improve it.

THE EDITOR.

"Too bad," I went on, "that he didn't have anybody to leave it to."

"Oh, he had a son," replied the young fellow contemptuously, "but he was no good. Funny too, for I have heard folks say that old Jack Drewe was one of the finest men that ever lived around here. He and my grandfather were the first comers here—took up homesteads when the land was all timber. They knew the soil under those pine trees was good, and they built log houses and stayed. Most people at that time thought it was too much work to clear the land, but Mr. Drewe and Grandfather toughed it out and cut down trees, pulled stumps, and burnt brush until they had real farms. Then the old Wisconsin Central came through here, bringing them close to a market, and of course after that other settlers came."

"After putting in all that work, you don't mean to say that Drewe left the

Jack Drewe, from everything I ever heard was a man, and you—"

"And I am a lazy, thieving bum!" I finished. "But, young fellow, while we have been talking I have decided to become just what my grandfather was—a square man and a good farmer. Your plain language has made me see light, and I am going to settle down right here in this neighborhood."

"You will never do it; you are too far down," was the discouraging reply, but I only smiled, for already I had begun to make my plans.

In October I was in the lumber woods, and did not come out until March. My wages were \$40 a month, and after my clothes were paid for I had a stake of \$150 left. This was immediately deposited in a bank as soon as I came to town, and then I went to work with a construction gang on a railroad. That summer I saved \$200,

It Pays to Put Apples Up Right

The experiences of a practical orchardist who has learned that fruit packed with style and quality about it gets the real money

By R. E. Loree

THE American apple has come into its own of late. Three years ago, when the world war began, the opinion was quite common among orchard owners and apple dealers that during the period of the war many of our high-grade apples would have to go to the dump. Well, three crops of American apples have since been harvested, and has anyone found good apples begging a buyer?

True, our apple crops have run considerably below average yields for that three-year period. But all who are "apple



Spray-gun improvement enables one man to do the work of two

wise" know that bumper apple yields the country over are the exceptional thing, and seldom do more than one or two market-glutting crops occur oftener than once or twice in a decade. As a rule, the superlative heavy crops lose money for all concerned, except the retailers and consumers. It is therefore safe to believe that the money-making apple crops harvested since the war began mark the beginning of greater future profit for the growers. Henceforth there is sure to be more systematic effort to insure a high quality by every art known to the industry, including thinning the crop, so that the glut of culls heretofore thrown on the market early will be eliminated.

Another thing the closing of the export market has taught us is that we have never until now realized how even the heaviest crops can be sold at a fair price in our own country by giving systematic study to this problem, and by using better selling methods in getting good apples directly within reach of the consumers.

A Five-Million-Box Crop

Many facts and figures prove my position in regard to the more profitable future for apple culture. One forceful example is a statement that recently came to me from a friend who is growing apples for a living in one of the chief apple-producing regions of the West. The apple crop shipped from this place the past fall and winter was between four and five million boxes. My friend reported that the growers unmistakably are making money even though the export demand has been small.

The same condition exists in practically every apple-producing center in America where the growers are aware that the public have of late become discriminating buyers, and as never before have become satisfied that uniform, sound, smooth, wormless apples at a higher price are a much better buy than are knotty, insect-eaten culls costing a half less.

Another indication of what one of the newer means of securing uniformly high quality has accomplished for apple growers—thinning the apples when partially grown—came to me last harvest from a well-known Michigan apple grower. From trees of the Wealthy variety of the same age and approximately the same initial crop before thinning, there was an increase of No. 1 quality apples of 1½ barrels per

tree; and the total gross income by thinning was over \$3.50 a tree, when the first and second grades were sold at market prices. This operation of thinning the Wealthy apples of his 1917 crop left a net profit for thinning of fully \$2 a tree.

A frequent remark coming from those owning land suited to growing apples is, "Growing an apple orchard requires too much time to realize on the investment, except in the case of a young person." But this kind of reasoning is being proved a fallacy in every progressive apple-growing region in America.

Here is one convincing example that recently came to my attention: A Michigan apple grower fifty-two years old bought a tract of 40 acres of land as a site for a young orchard. He planted the land to Northern Spy trees—one of the slowest varieties to come into bearing. He made the observation when planting this orchard that he would make his new orchard a convincing example that would increase the faith of the young people of his neighborhood in apple culture. This staunch friend of the apple is now eighteen years older than when the orchard was planted, but he harvested several crops of fancy apples from his young trees, then sold the orchard for \$22,000. The new owner had already harvested 20,000 bushels of apples from this young orchard previous to the 1917 crop, which sold for not less than \$1.50 a bushel. Last fall, from his crop of 12,000

the choice and number of varieties for a given locality, and helping to make the actual selection of the trees at the nursery for an orchard of any considerable size. Likewise, when preparing the orchard layout, planting the trees, and giving the initial pruning at the time of selling, a little money expended for that purpose is a good investment.

It is now the general verdict among the most successful orchard operators that wider spacing of trees is a big factor in getting results from apple trees when they arrive at their most profitable stage of production. Where Northern Spy trees and other long-lived trees of spreading habits of growth were formerly spaced 40 feet apart, now 45 to 50 feet are allowed in order to furnish plenty of "elbow room" for spraying, cultivating, and harvesting. There is also general agreement among orchard authorities that the fewer the varieties in commercial orchards the better unless a special summer, autumn, and winter local market trade is to be established.

One matter that I wish especially to emphasize is that when an orchard either for commercial or home use is being planted the owner should not consider his duty completed when the trees are planted. Decide at the start, before a tree is planted, that nothing shall prevent the needed attention being given the orchard. If there is any question about it, don't plant.

Questions to Consider When You Move

THIS is the time of year when many farm owners and renters select locations for the coming season. So true is this that in many leading agricultural States, especially in the Central West, March has come to be looked upon as the "moving month."

Farmer and farm ought to fit. The worker and his family, if they are to attain the highest degree of efficiency, must be pleasantly and profitably located. Dissatisfaction frequently leads to failure. What, then, are we to consider when planning the move upon which so much depends?

Whether we are to buy or rent, there are many principles that hold good. What of the last man who tilled the land? Was he a "miner" or a farmer? Did he rob the soil or build it up? Did he keep clean the fields and pastures or did he allow cockleburrs, buckhorn, and other weeds and plants to grow undisturbed?

Was he a financial success or a failure, and if the latter, whose fault was it, the man's or the farm's? What of the neighborhood—is it good or bad? Do "your kind of folks" live there, or will your wife and children be strangers in a

strange land? Are the people peaceful and law-abiding, or is the local justice kept busy settling petty troubles; and are "devil's lanes" to be seen between the farms where only a division fence should be? Is there a good school within reasonable distance, and is there a church of your preference, or one which you will be satisfied to attend, not too far away?

What of the market and of the roads leading to the farm? Remember that roads largely determine distance, while the market where we buy

and sell has much to do with fixing profits and losses.

Is the farm well-watered, and is there a plentiful supply of pure drinking water for family use? Are the improvements—house, barn, and outbuildings—in keeping with the value of the land, and such as you will need for the system of farming in which you propose to engage? It may also be well to ask if the farm is on a R. F. D. route, and if there are telephone connections, or if such can be made. Finally, is the location healthful?

Wise is the farmer who considers well these things.

W. L. NELSON.

*If vain our toil,
We ought to blame
the culture,
Not the soil.*

—Pope

The orchard that is kept sprayed, cultivated, and developing steadily from the start can be counted on to have a selling value of ten times that of the neglected one by the time the trees come into heavy production; and when a well-cared-for apple orchard of desirable varieties arrives at its best, a value of from \$500 to \$800 an acre is by no means uncommon, as can be confirmed in many places.

To develop orchards of such attractive values the equipment for spraying, pruning, thinning, cultivating, and harvesting is even more essential than when other highly specialized crops are grown. No one having ambition and intelligence need hesitate about entering the apple-growing business if he can secure suitable land where climatic conditions and marketing facilities are favorable. Make sure the start is right as heretofore described; then learn each successive step in advance before the step is taken. The outcome will, in many cases, transform \$50 to \$100 land into property ten times as valuable in less than twenty years.

Plans of producing a living for the owner of an orchard while the young trees are being developed are being worked out in various ways. Among these plans is the growing of cultivated crops among the trees, such as potatoes, tomatoes, beans, also small fruits and bush fruits. Another partial solution to the problem of getting quicker financial returns from the young orchard is interplanting the apple orchard with early-maturing varieties of apples, plums, cherries, and other fruits suitable to the climate.

Where this latter plan is followed I know of several instances where a commercial



These perfect Baldwin "drops" became culls by delayed harvesting

poultry business is combined with the development of the orchard by using the fenced orchard as a run for the laying hens and young poultry stock. But, all things considered, the best solution now appears to be the growing of those crops that will mature early, such as potatoes, cucumbers, beans, peas, etc., which allow of seeding the orchard to a cover crop in August after the early crops are harvested. The continued working among the developing trees insures the needed culture, and any appearance of fungous diseases and destructive insects is sure to be observed, and the same spraying and cultural equipment can be used for the fruit trees and interplanted crops. Likewise, the annual cover crops grown benefit trees and crops alike. This plan, of course, requires application of sufficient fertilizer.

The natural effect of the war in decreasing the farm-labor supply was to interfere with the culture and thrift and initial planting of many orchards. Therefore it should be the aim of every orchard owner in this country to prevent depreciation in the value of his orchard, and there is also good reason to believe that, where additional apple orchards of suitable varieties can be planted and cared for properly, the outcome will be a valuable investment for the owners in the years after the war.

bushels, he sold the best grade for from \$2.25 to \$2.50 a bushel. These figures are for gross returns.

The choice of site and varieties for apple-planting is a matter of vital importance. A beginner can soon learn to give the required care to an orchard that is already established, but he can easily afford to pay a practical orchard expert well for counsel in selecting his orchard site, determining

The right attitude when planting a fruit orchard is that from the time of planting it must have equally good protection and care as crops of potatoes, tobacco, and other crops susceptible to injury from insect pests and plant diseases. The campaign against orchard enemies should start with the first season's growth of the trees, and continue until the orchard is ready to be made into fuel and lumber.



"Red" and "Bud" hard at it

My Solution of the Farm-Boy Problem

Being some valuable pointers from a farm father with sons of his own, on how to keep the youngsters interested where they are

By William Leslie French

it might prove a good thing. My acreage needed at least sixteen regulars daily. At this period I was beginning in a small way. These boys had to be fed, clothed, washed, kept clean physically, mentally, and morally. It was not a school or a vacation club. No military system. Discipline was maintained. But the methods for making the boys toe the scratch differed in many particulars from those existing elsewhere—methods I believe any farm parents can apply with good results.

First, to get the best results I had to learn again what a boy thinks, and why. I had to review what I had experienced in boyhood and compare it with the chats I had had with my own young friends. Two ideas stood out boldly. Each boy has an ideal, vague or clear as the case may be. There may be half a dozen goals he wishes to reach. And each boy holds close to his inmost self some person, living or dead, who has done some heroic act, whose life is colored by adventure or big achievement. We cannot successfully ignore these dreams of boyhood. I have found it valuable to know what they are in each individual, and to build on them as the cornerstone of successful boy-handling. Your boy has them too. And you can get at them with a little effort.

The first thing I did on this experimental farm adapted for truck-gardening and the cultivation of small fruits was to lay the entire property out in "memorial" garden plots. This can be done on any farm. Each plot was assigned to a boy to cultivate. Each was named after some man or woman whose life was a good example of work performed well. One shone clearly as a mother, another had given his life for his country, a third had been a great inventor, and so on. And although this phase of the scheme may seem a little far-fetched, the type of vegetable was grown which represented the leading traits of the person it was named after.

Potatoes, with their starch, mineral salts, and water, being essentials as food, stood for physical endurance, will-power and strength. Flowers also marked the corners and the borders, suggesting moral

night as it is in the daytime. It was a tough proposition when the winds blew, the snows came, and the thermometer went down and down. But it toughened us all to stand any hardships. We splashed through a cold bath every morning regularly, following the cock's crow. Every newcomer went through this little appetizer for breakfast, but began with a "sponge-tickler" until he could stand a full plunge. As the Boss was the leader, it was not long before the habit was acquired.

In cold weather this was vigorous treatment. But colds were unknown. If anyone showed a symptom, right into a hot bath he went, followed by a cold-water rub-down, and then under woolen covers. A modified form of Turkish bath! Naturally, during the winter athletics were the rule. But for the balance of the year it was not necessary, for the farm work and swimming kept them muscularly busy. We began our water sports in April and continued until ice came. Of course, it was hard, but there are things which are much harder to bear if we have weak bodies. I take off my hat to this method—not altogether my own—for nervous excitability, boy-laziness, and the stirring impulses of youth were held largely in check with them.

As our animals had a balanced ration, so with ourselves. Fruit, green stuff—lettuce and spinach, "the whisk broom of the stomach"—accompanied the staple vegetables. Beans were camouflaged in many ways. They bore one so when always baked or souped.

It gave my cook associate and myself some thought, and then some more, to put it over; but we did. And olive oil in one dish daily! We did not advertise that fact. Boys are frequently fussy about what goes into them. Meat appeared four times weekly. Except for eggs, we regarded the frying pan as belonging to the stone age of cooking.

Perhaps I seem to lay too much stress on these health combinations; but the result was fine. Support twelve to sixteen lads—always hungry—keep them well, pay them a profit over expenses, and you have to do some close figuring. But during the entire period—years—not one cent ever went into the bank account of any physician. True, contagious diseases did not visit us. Infantile paralysis raged around us and our farm was quarantined. The only paralysis that struck us was how to market our produce. It looked dark. The boys laughed at the disease, saying that they were young men. I think they were proud of their physical strength. The hint of relief came from one silent chap while we were all in conference. Meetings were held weekly and discussions were encouraged. They knew they were my partners. Frequently I found out that their young minds worked out an idea worthy of an older head.

This boy said: "Why don't we can and

dry our green stuff in large amounts and save every bit?" This had been our practice, but only to supply our home needs. Long before the Government began to advocate the dehydration of foods we had been doing it successfully. Needless to say, we all agreed. Our products were saved, and sold in the late fall at a good profit.

I am thoroughly convinced that if you wish to get the most out of a boy you must make him your partner and ask him for ideas. It trains his mind, teaches him to think about his work, stimulates his ambition, strengthens his self-confidence and pride.

It was our custom that if anyone of our number—for my associate and myself were always included—made a mistake once it was due to ignorance. A second time carelessness, and a third, laziness or inattention. Whenever this happened a vote was cast and the punishment measured out. Frequently it was a fine, but more often some great pleasure was denied the culprit.

It was a hard and fast law that all tools should be put back where they belonged. It was closely observed, for the punishment was a stiff one. One late afternoon I had been using a fine cross-cut saw, but thinking about something else I forgot to bring it into the toolhouse. This had occurred twice before, and the boys were laying for me. At the conference, after one or

two had met their just desserts, they called my attention to that tool. The piping voice of a youngster broke out, "Fine him smokes for forty-eight hours!" After those forty-eight hours of torture had passed, the boys, eyes snapping, handed me tobacco and matches. They had counted the hours to a minute, and it was customary to inform one that he had paid the price in full.

It may strike the reader as rather unusual that the head of a boy colony should apparently place himself on a level with them. Not so. I discovered that it worked well with my own boys, and when the number was increased it made for a sympathetic comradeship, where no one feared me, and yet learned that they could not take liberties.

Each boy was told that I trusted him absolutely. At once after my first talk I gave him some important things to attend to which if neglected would hurt me personally. Sometimes he fell down. When he did I never took him to task. I would laugh, coupling it with some story where as a boy I too had forgotten to do as I was told. At that moment we became friendly. With some the bond was forged quickly; with others it took a longer time.

Boys are shy in showing what they really feel. But where one showed an inclination to take advantage or be impudent—and this is quite common—or said, "I won't do it," I just looked at him and began my silent treatment. Never did I speak a word to him, in the fields, at the barns, or at table. I carried out this keep-a-distance manner whenever he came near me. After three days, usually, I would find him waiting in the hall or near the office. In an offhand way I would catch his eye. For a moment he would grow confused, then motioning him to approach I would say: "Don't you think that you and I had better shake hands?"

We did. And immediately I would say: "Will you please do so and so for me?" And it was a joy [CONTINUED ON PAGE 52]



Photograph from Brown Brothers
William Leslie French

Growing Boys is Like Growing Corn

YOU can't turn a crop loose and let it grow wild and expect to realize anything from it. We all know that. You've got to cultivate it, and watch it, and help it along. The same is true of boys. Not all of us do know that. The youngsters may not have presented themselves to you in just this light before, but after reading this man's story, perhaps you'll see, as we did, how true it is.

William Leslie French, the author of this article, is the son of the monk William Glenney French, who founded the monastery of Valle Crucis in the mountains of North Carolina and made it over into a colony to teach girls to keep house and boys to farm. French himself has been in the farming business and the boy business all his life, having within the last few years founded the farm-boy colony in New York State upon which the information in his article is based.

THE EDITOR.

and spiritual beauty by their colors and forms. The results for which we were striving were accomplished. The appeal to the boy's growing imagination was strong. The lads took great pride in trying to live up to the models they had chosen. I always gave them their choice.

I remember one little boy of ten, whose mother was dead, who asked whether he could have a mother plot. Indirectly it gave them a belief in immortality. Also, it helped them to remember to be careful in tilling the soil and to weed properly.

The value of this plan lay in its educational training. It gave the boys a wide outlook on life, and it got the work done. The boys asked questions constantly. They seemed to breathe in the facts with their very nostrils—and remembered them.

Fresh air, cold water, and sunshine are the three graces of human life. As a household, we slept on screened porches winter and summer. Fresh air is as important at

THE average farm parents often wonder why their son or their neighbor's son shows an open dislike for raising crops or the other duties which are necessary around the place. They dodge the constant daily grind. Unexplained restlessness and open revolt occur. Suddenly the lad packs up his kit and makes a break for the more exciting life in centers of which he has heard or read. Generally the farmer blames the movies. But that is not always the answer, by any means.

The problem of keeping our boys on the farm is one with which we are face to face throughout the country. It is a problem which I have been able to solve to some degree. And in giving my experience it may suggest a better understanding and weld a stronger link between parents and sons, between employer and young field laborers.

In my own experience, and from what I have learned from men and women who have been familiar with such unhappy conditions, two facts have impressed me forcibly: Nine tenths of the troubles arise from a man's not taking the time to study his son as he would his farm. He uses his common sense in growing oats or wheat, looks after his cows and chickens as if they were gold. He may be shrewd in marketing his products. He watches the weather, the soil, rotates his crops, and does everything to make his farm produce fully. And the lad passing through the adolescent period, with youth's ideals and changing ambitions—a dreamer of dreams—called "stupid," perhaps—well, he often gets short shrift. The man forgets that in earlier days he too, perhaps, had ten different ambitions crowding his mind, as this boy has.

This is not a criticism: it is an observation. I have made the same mistake. I am a farmer, as you are, and if I can help you solve this problem I want to do it. Perhaps you too look forward to the day when your youngsters will lift the burden of the farm from your shoulders, and to prepare against that day by giving them the desire to take that burden, and to equip them to be able to take it, is, I believe, worthy your best thought and attention.

Having been interested in practical intensive farming for years, raising vegetables and fruits, I decided to establish a little farm colony. At various periods I had employed boys to help out in the summer, and I had had a chance to experiment with them a bit. Some had told me that they preferred to work on my place rather than at home. I determined to find out why. Besides, my own two youngsters were beginning to grow wings—not angel wings—and places other than the home nest seemed very attractive. A few more boys might help to pin them down. Companionship! A good point to remember.

Further, the question of labor was appalling. It seemed reasonable that if a number of boys could be brought together to work co-operatively, and share in the profits,

Is It Safe to Go In for Live Stock?

A careful survey of the leading live-stock men throws some interesting light on that knotty problem just at this critical time

By Thomas J. Delohery

IT'S pretty bad business to make predictions in the midst of an exciting event like the International Live Stock Show. You're apt to be overenthusiastic and pass out some hunches that may not prove so good in the harvesting. After the show is over and you've let its impressions vegetate in your mind for several weeks, you're apt to evolve some fairly sound reasoning from them.

This, then, is the net result of gathering, co-ordinating, and analyzing the best thought of the best live-stock men in the country when they came to the show. Their verdict, in a sentence, is that the future for live stock looks good.

Hoover called the International a food camp. And so it is, but in addition it is a gathering of shrewd, clear-thinking, far-seeing live-stock men to compare notes. I talked with practically every man of consequence who attended, and the few I quote here represent the best thought of them all.

While different individuals differed on details, everyone agreed that the future of the industry never was more promising. Don't gather, however, that live-stock men are tossing their hats in the air and patting each other on the back. Hardly that. They are a quiet bunch as far as outward signs go, because they have their problems. But they are not impossible problems, and the live-stock man's hope is high.

Perhaps I fail to take in both sides of the situation, but if you spent eight days talking with live-stock men you would be like I am. Why, even the horsemen wore natural smiles, so you can write your own ticket. I say this because it is the popular opinion that the horse market is not promising.

The present feeling of the industry is just the opposite of a year ago. Things at that time did not look so bright, but live-stock men are just rounding out a prosperous year, and the future holds prospects even better than last year.

When the editor of FARM AND FIRESIDE told me to go to the International and talk with these men, I figured I would meet a wide diversification of opinion. Instead I found harmony, perhaps for the first time in history.

Everyone expects a big domestic demand; but, strange to say, lower prices are looked for. The first man who told me this was Carl Rosenfeldt of Ames, Iowa, who is one of the biggest breeders of Angus cattle in the country. This assertion puzzled me, and, seeing this, he explained that the decrease would be due to a lowering of the cost of production.

"The future of the business never looked so bright to me," said Rosenfeldt. "And to show how much I think of it I have increased my breeding operations about 25 per cent. I want to be in on the demand when it starts, and I expect it mighty soon. I don't look for prices for breeding stock to maintain their present levels; that would be asking too much. Prices will break, but not a great deal; and with cheaper production cost there will be a profit in the business for five or six years to come."

P. M. Anderson, a canny Scot, of Newell, Iowa, stopped talking turnips with his friend George Cran, who came from Scot-

land to judge the Angus cattle, long enough to tell me that he saw a good market ahead for the breeder and feeder; but he added that it would depend largely on economical production. Mr. Anderson is a breeder of pure-bred Angus cattle and Chester-White hogs, as well as a feeder of cattle and hogs for market.

John M. Evarrd of Ames, Iowa, perhaps the ranking hog expert in the country, was conservative, but optimistic.

"While I expect a good market for hogs, it is one man's guess against another's," he said. "In my judgment, I doubt the possibility of any bad break in the market

stated, "has some elements of danger unless wise counsel prevails—and this counsel will prevail. I expect a very large foreign demand for meats in the very near future."

The United States as a whole is short of beef, according to Ed Hall of Mechanicsburg, Illinois, a practical feeder of live stock, who, during the last few months, has been all over the country, and also in Canada.

"I expect high prices will continue because of the shortage of beef," he said. "The country has plenty of hogs, but the demand is bigger than the supply. Wages, too, won't come down for some time, and

about \$300 a head. I don't expect any real increase in the prices of horses immediately, and not much of one during 1919. The year 1920 will see the biggest bulge."

David Fyffe of Columbus, Ohio, is known to every live-stock man in the country. Like Dean Curtiss, he differs from Mr. Dinsmore, but thinks horses will pick up a little. Prices may not go higher, but the profits will be there just the same, because feeding costs will be smaller.

He can't see much of a foreign demand for horses. Cattle and hog products, however, will find a good market, he said; and cattle and hogs will sell at such a price that the producer will make a profit. Mutton will be remunerative to the sheep producer.

Speaking of the outlook for cattle, I met Jim Brown, head buyer for Armour & Co., and asked him to tell me a few things. If any one knows about market cattle, Jim Brown is the man.

"I never saw anything look so good as the future of the beef-cattle market," said Brown. "The demand will be so good that anything which is fat will sell well. Prices will be especially good for stuff which is going on feed at the present time, or the near future. Steers weighing from 1,000 pounds up, in decent to pretty fair flesh, will find profitable prices."

Charlie Gray, secretary of the Angus fraternity, expects a good market for breeding stock for the next few years. The range of prices, he said, might go lower, but the cost of production would be cheaper and enable breeders to make money at lower prices.

Bob Evans of the Duroc Association says that the demand for hogs during the coming year will be bigger than ever, and Bill McFadden of the Poland-China camp agrees with him. Mr. Evans based his opinion on the trend of the market for hogs for slaughter, saying that the breeding business revolves around this point, and that good prices for hogs mean good prices for breeding stock.

Auctioneers sometimes can quit shouting "Givabid!" long enough to let you get their personal opinions. W. Murray Putman of Tecumseh, Nebraska, after crying forty-five sales last fall, came to visit the International. I found that in addition to being a hired seller he has hogs of his own.

"The demand for breeding stock will be good," he said. "It is selling well now, and every indication is that this stuff will continue to sell well. I cried forty-five sales this fall, and the prices ranged from \$70 to \$432 each for spring pigs—a world's record. I think prices will hold steady for the next two or three years."

No one knows the live-stock game any better than Prof. H. W. Mumford of the University of Illinois. In addition to heading the animal husbandry forces of the college, he has a farm of his own in Michigan.

"As a breeder, I think the outlook for my business was never better," he said. "I base my conclusions on the fact that there is a world shortage of meats, especially of fats; and hogs are the cheapest and quickest means [CONTINUED ON PAGE 38]

She Drags the Roads

MARY RICHARDS, seventeen years old, has added a new profession to the long list of new things that farm girls and women are undertaking. She drags the roads.

Her farmer father had the 1918 contract to drag a stretch of country road near Leon, Iowa. He was killed last May. There seemed to be no one to take his place, when up stepped Mary, just finishing third-year high school, and announced to the county supervisors that she would drag in her father's place. She is an expert horsewoman, and in middy, bloomers, and big



Photograph from Florence L. Clark

hat has made a picturesque spot on the landscape all summer and fall riding the drag. She drives three horses on the drag. The roads are not the best-made dirt roads in the world, and sometimes when she hits a bump she is thrown off.

"But that's nothing," she says. "I soon get on again."

When not dragging roads Mary helps her mother do all the work on the farm. They

have not hired a day's labor during the summer. Raising and gathering 45 acres of corn was just one part of the work they did.

for hogs. There is a big demand for pork products, and to some extent beef. The market is limited only by available shipping space.

"When the reconstruction period sets in, I think the hog market will see price fluctuations, as it did before the war. I think the man who holds his hogs for the late market is not making a bad guess, for at present everyone seems to have the liquidating idea. But we need the product, and more of it."

Governor Henry C. Stuart, who is chairman of the Agricultural Advisory Committee, visited the International to find out a few things about the live-stock industry. Like myself, he went home favorably impressed as to the future.

"The outlook, while it is good," he

This is Ed Hall of Mechanicsburg, Illinois, and a load of his prize Angus yearlings



Do Doctors Give You What You Pay For?

Four thousand American M. D.'s agree that they don't, and here is their plan for changing the system so both doctor and patient will fare better

By George Martin

FAR be it from me to sit here and harp on that old tune about the farmer who pays more attention to the health and comfort of his hogs than he does to that of his family. That odious comparison has been sprung in season and out of season until it has become a perennial insult. The farmer doesn't need preaching. He wants facts.

The farm people of this country—and they number more than half the population—are on the whole better housed, better clothed, better educated, and better equipped with the little luxuries that make life enjoyable than the average run of people in towns and cities. And they are pretty well able to take care of themselves. The popular picture of a farmer in a tattered straw hat with a wisp of hay hanging out of one corner of his mouth is no more representative of the American farmer of to-day than the battered bum who walks along Sixth Avenue is representative of the population of New York or Chicago or San Francisco.

Nor does the farmer have to be talked down to. The man who sits in a city office and tries to tell the farmer his business nowadays is a fool. If you've got a good business proposition to put to the farmer you can put it to him straight, without sugar-coating, and rest assured it will be intelligently considered.

All of which brings us to the fact that never once has the matter of health among country folks been put to the farmer as a business proposition. It is a business proposition. We have been argued at and argued to and argued with about it; our children and hogs and our cattle have been compared. The matter has been shoved at us in a dozen unpleasant ways; but never have we been shown just *how* and *why* farm health conditions deserve our attention. We have felt that our health on the farms was pretty good, anyway.

The writer found a man the other day who *did* show *how* and *why* that is not true. He had the facts, and we're going to tell them to you just as he told them to us. His name is John G. Bowman, and he is director of the American College of Surgeons, with offices at 25 East Washington Street, Chicago, Illinois. He used to be president of the University of Iowa, but when in 1913 a group of representative physicians and surgeons decided that their profession was organized on a basis that cost the people a lot of money and didn't give them adequate service in return, they put Bowman at the head of their reorganization work, where he is to-day.

"We started," said Bowman, "with 2,500 surgeons who believed that the whole medical and surgical machine was working wrong. Those men contributed \$500 apiece out of their own pockets to finance an investigation of the health-service problem throughout the country. Since then the organization has grown to 4,000 members, scattered all over the United States. It has definite plans, based on facts, for the future.

"Our probe into conditions has led us everywhere—to the farms, the factories, the villages and cities; to hospitals, sanitariums, and into schoolrooms and private homes. Last year we spent \$30,000 studying hospitals. We kept accurate records of the patients as they came in, watched what was done to them, how they were treated, what attitude doctors and nurses took toward them. In that way we got figures showing precisely how efficient the hospital service was, whether it usually got at the real trouble, whether it treated it properly, whether the average patient is personally well treated, and whether, on the whole, the average patient gets his money's worth. This year we are spending \$60,000 more in this work. We already have enough facts to show that conditions could be a lot better.

"Perhaps you think that this can have little to do with country people; that they seldom go to hospitals, and that they don't suffer from ill health as a rule, anyhow.

"Well, just to give you one or two facts on that situation, let me tell you that country folks under present conditions

don't come as near getting their money's worth from their doctors as city folks do. Statistics show that a proportionately larger percentage of farm babies die than babies born in cities. The infant mortality of a community is a pretty good yardstick to measure that community's living conditions by, and on our farms it doesn't measure very well.

"For another thing, I am told that elsewhere in this issue an authoritative article states that there are more agricultural accidents in the course of a year in this country than there are industrial accidents, and that from these two causes an army of two million maimed men is always with us. When you consider that our casualties in the European war were fewer than half a million, the accidentally maimed two

to figure the cost of the time he uses running to this farm and to that day after day. And Mrs. Smith has to pay for it all. The doctor is sorry. Mrs. Smith is more than sorry. And nobody is benefited one particle—maybe not even Willie.

"Take a concrete example of how even Willie may not be benefited. We'll say that Willie complains of a fever and a pain in his stomach. For all the doctor knows, from what he can learn by a mere casual examination, Willie may have appendicitis. If the fever and pain are real bad he may, in the absence of proper equipment to determine exactly, say that Willie *has* got appendicitis, and recommend an operation. You can't blame him for that. Willie *may* have appendicitis. And if the doctor refused to say he thought so and to recom-

health conditions, we humans don't take it home to ourselves. We think it would be all right for the other fellow, if he wants it, but we don't think we need it very much.

"This was very clearly shown to me one time when, as president of a certain state university, I had occasion to go before the state legislature, made up mostly of farmers, and ask for a rather large appropriation for the improvement of the university medical school. The matter was being presented to the joint committee on appropriations, and a big farmer of my acquaintance, a member of the committee, got up and announced:

"You'll never get half the amount you ask from this legislature."

"I answered:

"Say, Bill, if your wife and daughter were sick and about to die, and the right kind of help wasn't at hand to save them, what would you give to know that they had the best medical care in the world? You'd give all you've got and all you ever expect to have, and you know it."

"He came right back at me and said:

"That's all right. But we've got plenty of doctors."

"So we have," said I, "but *what kind* of doctors are they? Did it ever occur to you, Bill, that without the right kind of equipment in this medical school of ours, the kind of equipment I'm asking for, we are bound to turn out half-finished doctors? And did it ever occur to you that with half-finished doctors working for you a lot of farm folks as well as a lot of city folks are going to die who don't need to die at all if we have good doctors?"

"Well, the appropriation went through without a hitch.

"What I said there will apply to every part of the country.

"Now, doesn't it strike you that it would be the wise, the sensible and the right thing, after we have got the equipment to turn out real doctors, to change conditions in the country so they can render farm people the most efficient service for the least cost?

"What would you think if, instead of the present hit-or-miss system of 'visits' from the doctor, all the doctors and all the people of a county got together and built a thoroughly equipped, modern, up-to-date community hospital, with trained nurses and a laboratory and everything necessary to enable the doctors to do their best for all their patients?

"Wouldn't you be in favor of a place like that where, if Jim got his hand in a corn shredder, or Joe *seemed* to have appendicitis, or Mary was going into a decline, or Father's back was bothering him, you could go and find out definitely, quickly and *accurately* exactly what the trouble was and what ought to be done about it?

"Wouldn't you favor a place like this, where expectant mothers could go or write for the best advice, where experts would have the facts about the condition of the water supply, and the milk supply, and the fever-breeding spots of every foot of that county's territory, and have them in such shape that they could tell you exactly how to improve them?

"A community hospital like this would be equipped to help out on the problems of infant welfare. A few simple directions of the right kind from your hospital might keep your boy out of a bad sick spell just at the time you needed him most with the crops. There is no limit to the good an institution of this kind could do. And in the aggregate it would cost less money and accomplish more good than our present exceedingly inefficient system.

"With a place like this you wouldn't have to pay \$500 for a simple operation that took only twenty minutes of a surgeon's time. And there would be no guesswork about the problems of health when they came up.

"That is one of the big things we hope to accomplish in this work we have been building the foundation for for six years. We need your help, your sympathy, your co-operation. And we feel sure that, once the facts are before you, we will get those things hands down."

To which we heartily say—Amen!

His 400 Hens Earn Him \$1,500 a Year

By John Francis Case

FOUR HUNDRED hens at The Boulders Farm in Iron County, Missouri, are earning \$1,500 a year for their boss, J. W. Jewett. And although they might have free range over 1,000 acres of mountain land, these egg producers are confined in close quarters the year around. With a producing value of \$4 a hen the owner considers them too valuable to risk on range where they would be easy prey for vermin. The flock has been confined for seven years.

J. W. Jewett spent years in the employ of A. B. Pierce as bookkeeper, and a friendship developed which meant much to both men. So when the Pierce family moved to The Boulders, Mr. Jewett went along to "look after" his boss. Neither Mr. Pierce nor Mr. Jewett had previous experience with swine or poultry, but both were eager to learn. The remarkable thing about it is that from the beginning these novices made good. They had the sound business judgment to "hook up" with the experts at the college of agriculture and the poultry experiment station, and to make a careful study of the information available.

In the division of labor, Jewett has charge of the poultry. Starting with 60 pure bred Single-Comb White Leghorn pullets in 1911, Mr. Jewett has bred up a flock of 400 hens that now average around 200 eggs each a year. No trap nests have been used, but approved methods of culling are employed, and carefully selected males from laying strains head the breeding pens. As the production of infertile eggs is the principal object, only enough chicks are hatched every year to replace

the hens culled out. The chicks are incubator hatched, and cared for by a brooder stove. Plenty of fresh air and sunlight are provided, but they are kept in the room or penned until grown.

The flock of laying hens is kept in an immense two-story house, the ground floor being used as a scratching shed, while the hens lay and roost in the upper rooms. The room containing roosts has open front, and there has been little trouble with disease. An abundance of lime and frequent spraying of the nests and roosts keep down vermin. All the rooms, up and down, are kept scrupulously clean. Mixed grain, alfalfa, and bran is fed, and plenty of scratching material is provided.

More than 30,000 eggs produced at The Boulders every year are sold to private customers in St. Louis. Packed in strong containers, attractively labeled and holding 50 eggs, the customer pays a flat rate of 50 cents a dozen the year around. Shipments average about 600 eggs a week, and during the months of increased production surplus eggs are sold to a packing company at a premium. These sales, added to the sale of cockerels and pullets from the breeding pens, about pay the feed costs.

The advertising necessary to secure customers for 30,000 eggs a year cost Mr. Jewett less than \$25. When he devised the plan in December, 1913, Mr. Jewett had 1,000 attractive folders printed, telling about the desirability of using infertile eggs and soliciting orders on a year-around basis only.

In shipping more than 150,000 eggs by parcel post Jewett never has had a complaint of breakage. There may be a tip for some of us in this story.



million of peace times is a pretty heavy toll.

"With the results of our investigations before us, we have studied conditions in the farm country. We find that when Willie Smith gets sick and his mother calls the doctor, and the doctor comes out in his car with a little black leather case in his hand and looks Willie over and gives him some medicine and goes home, it is often a losing proposition all around. The doctor cannot possibly bring with him the laboratory equipment or instruments or apparatus he may really need to find out for sure what is the matter with Willie. So he does the best he can without that equipment. He also has his car to keep up. And he has

mend that Willie be operated on, and Willie died, the doctor wouldn't feel very good about that, and neither would Willie's folks.

"I have taken Willie's case as an example. There are thousands like it in various forms throughout the farming sections of the country all the time.

"The solution, in our opinion, after very careful investigation, lies in the co-operative reorganization of medical and surgical service for farm people by the farmers and the doctors. They have got to get together. The protection of human life is a pretty vital thing. But somehow, when a man begins to talk about a national, or a state, or even a county plan to improve

Yankee Pigeons in the War

It may be that the children of Homers from your own cote did some of the deeds this story tells about

By Frank H. Hollmann

MR. HOLLMANN, a pigeon fancier himself, is in a position to tell us with authority the story of these brave little birds which have done so much to help win the war. He lives at Warrenton, Missouri, is editor and publisher of "The American Squab Journal," and studied every step of the Homer's development as a bird of war from the beginning.

THE EDITOR.

ONE night on the western front a group of doughboys climbed the parapet and crawled toward the German lines through No Man's Land. The darkness was inky, and one of the group, suddenly finding himself lost from his companions and trapped between two German outposts where his slightest move would mean almost certain death, took off the wicker basket strapped between his shoulders, scribbled a note giving his position, attached it to the celluloid cup on the left leg of the pigeon in the basket, and turned the bird loose.

Up flew the little creature, circled twice in the blackness, then shot at a mile-a-minute clip through the barrage the Germans had laid down to keep the doughboys from getting back to their lines. In less time than it takes to tell it the little winged warrior fluttered into its cote near division headquarters. An officer read its message, notified regimental headquarters on the trench telephone, which called the post command in the front line, from whence a stronger patrol went over the top and rescued the trapped doughboys.

American pigeons saved the lives of hundreds of American boys in France every day of the fighting. When telephone, telegraph, wireless, courier, wigwag, searchlights, war dogs and all other means of communication failed, the Homer-pigeon almost invariably got through the lines with its important message. They would fly at incredible speed, battle their way through heavy barrages and all kinds of difficulties, and would either get home with the message or die in the attempt. Often they arrived with shell wounds in their breasts, their feathers clipped by bullets and shrapnel splinters; but they arrived, or they died. Don't ever forget that that pigeon which flies around the old home farm proved itself one of the bravest and best of warriors in the greatest conflict in history. Thousands of them have died for their country, and their exploits would make a book in themselves.

When the Germans invaded Belgium special attention was given to the pigeons owned by the civilians. Thousands of cratesful of carrier pigeons were seized by the Germans on the occupation of Brussels. Signs were posted throughout conquered Belgium ordering all pigeons to be brought in to the military authorities, and for those who delayed, the penalty was death. It is said that the pigeons captured, or rather taken, from the Belgians were banded with the letter K to denote their being prisoners of war. Later the birds were either slaughtered or used for food by the Kaiser's hordes.

At Antwerp all the birds were chased from their lofts to liberate all hostile birds not native to that city, thus preventing the inhabitants communicating with their allies.

In spite of threats of cruelty and the penalty of death, many brave Belgians did not deliver their faithful messengers to the Hun, and but for that France probably never would have received the information that she did regarding the atrocities and cruelties committed by the merciless invaders.

When some of the populace in northern France evacuated their homes for safer zones, many of their pets were left behind. A great number of these birds were later rescued by the British Tommies. Hundreds of them were found dead from wounds and gas.

The British Navy made good use of the carrier pigeon too. They proved invaluable



ble as a form of auxiliary wireless for seaplanes, submarines, and trawlers. Rapidly winging its way through the air, a carrier pigeon would speed to shore to bring aid to a seaplane pilot. The British Navy supplied every seaplane, submarine, and the small trawlers unequipped with wireless, with these birds to carry messages when the craft had to send for help.

A British patrol boat was shelled by a German submarine, but in the encounter the U-boat was finally sent down. However, the patrol boat's condition was so perilous that unless help was received the boat would sink. Only one pigeon was left in the basket. It was turned loose, and half an hour later the entire crew of the patrol boat was rescued. In another instance a carrier pigeon, by flying through a gale with a message summoning aid, saved the lives of four airmen forced to come down at sea. Another pigeon, by delivering an appeal for help, saved the lives of six British airmen who were attacked by the enemy. The English fishing boats that did not carry wireless reported the location of submarines, mines, and enemy craft by pigeon. In fact, almost every patrol boat in the European waters carried pigeons.

Pigeons are more reliable than the wireless. The Hun might "butt in" and "jam" the dots and dashes, thus rendering the wireless useless. No such danger of "listening in" on the pigeon, for the only way the message could be stopped was by getting the bird, and one can imagine how hard it would be to hit the almost invisible fast-winged courier. In the great American advance and capture of the St. Mihiel salient, tanks were used for the first time by the Americans, and these tanks were supplied with carrier pigeons. In fact, the only means of communication with the advance troops was by pigeons. The speed of the carrier pigeon is often a mile a minute, and frequently much more, depending upon weather conditions. Recently thirty-seven birds were liberated twenty-seven miles away from camp and reported back in eighteen minutes. A Homer flies accurately up to at least six

and intensely hot. The pigeon carried a message of good cheer to Mrs. Gilkeson, the major's wife. You may ask how the Homer knows where to fly. This is because of its homing instinct. No matter where a Homer is liberated, it will return home, or die in the attempt. Of course the Homer itself perhaps did not realize the wonderful part it played in helping to win the war, but man has been able to make wonderful use of the little fellow because of its ability to fly back home whenever or wherever liberated.

Thousands of Homers were trained in the Pigeon Section of the army, and hundreds of young men who have been pigeon fanciers in civil life were Uncle Sam's trainers. The Government established hundreds of homing pigeon lofts in connection with the different camps, cantonments, and aviation fields. Uncle Sam was successful in getting all homing pigeon fanciers to enlist their services to help train this mighty army of winged messengers of the air, which played such an important part in America's fight for humanity and civilization.

The Pigeon Section was one of the most important branches of the Signal Corps of the army and marines, and was continually enlarged to keep pace with the increased fighting forces.

Even the Hun realized the pigeon as an important part of the fighting machine, and it is said that Germany at the start of the world war had several thousand carrier pigeons in service, besides taking over all the trained birds belonging to the civilians, including those belonging to school boys and girls. For years the German Government set aside \$15,000 annually for the upkeep and development of the carrier pigeon service of the army.

France is said to have had the largest number of carrier pigeons. Some authorities place the number at 30,000, while others estimate it at 40,000. The French made very extensive use of the carrier pigeon, and they officially announced that they had found the homing pigeon to be 97 per cent efficient as a means of communication.

The training of the carrier pigeon in France was very systematic, and was given careful attention by the officials. Three times a week regular postal service was maintained between certain of the military depots. The birds were sent by rail, automobile, or motorcycle, to the selected stations to be liberated. A careful record was kept of the birds to determine the best flyers.

The entire country behind the French lines was dotted with pigeon lofts, all camouflaged or placed in hidden parts of the country. The French lofts were usually motor trucks or wagons. These mobile lofts held from 75 to 200 birds. In addition to the mobile lofts, they had stationary lofts at headquarters, which held several thousand pigeons. It was to these lofts that the young pigeons, or "squeakers," as they are called, were shipped in order to be distributed to the mobile lofts behind the lines, to be trained.

The pigeons that went "over the top" were taken from the lofts at headquarters, carried up to the front-line trenches and distributed among the boys in the scouting or attacking party. The birds were placed in wicker baskets or cages, and these baskets strapped on the backs of the soldiers. When a scouting party was ready to report some important information or was in need of help, the message was written on thin rice paper, placed in the small capsule attached to the pigeon's leg, and then the bird liberated. The bird would shoot up in the air, circle once or twice to get its bearings, and when about half a mile high would dart off for its home at such a powerful speed that there was practically no chance for any anti-aircraft gun to shoot it down. Pigeons invariably got through the heaviest barrage, and the thunder of cart-ridge and cannon and the deafening explosions of shot and shell did not get our faithful little messenger excited in the least. It would go right to headquarters and deliver the message entrusted to it. It is a real warrior.



hundred miles, and this great flight may be made in a day.

At Camp Funston messages were sent a distance of five miles, by dogs, wireless, and pigeon. The pigeon had the honor of delivering the message first, and Lieut. William L. Butler, in command of the birds, reported that the pigeon made the five miles in two and one-half minutes. Sixty miles an hour for a short distance is not an extraordinary feat for a trained Homer if weather conditions are favorable. Racing Homers are known to have flown as far as 800 miles in a single flight.

The pigeon Section of the U. S. Signal Corps at Fort Leavenworth, Kansas, under command of Col. J. B. Allison, annexed a record when Lady Allison flew from Camp Funston to Fort Leavenworth, a distance of 125 miles, in two hours and ten minutes—almost a mile a minute. This is claimed to be a world's record for a pigeon carrying an army message in a regulation capsule attached to its leg. The bird was only a youngster, and had just undergone a hard

trip by motorcycle over rough country roads. Thirty birds

took part in the flight, which was made under

rather unfavorable conditions of extreme heat and

rain. Lady Pershing made

the next best record—two

hours and twenty

minutes. The Pigeon

Section at Fort Leaven-

worth is in charge of

Sergt. George F. Skeel, who

is recognized as one of the fore-

most fanciers of racing pigeons in

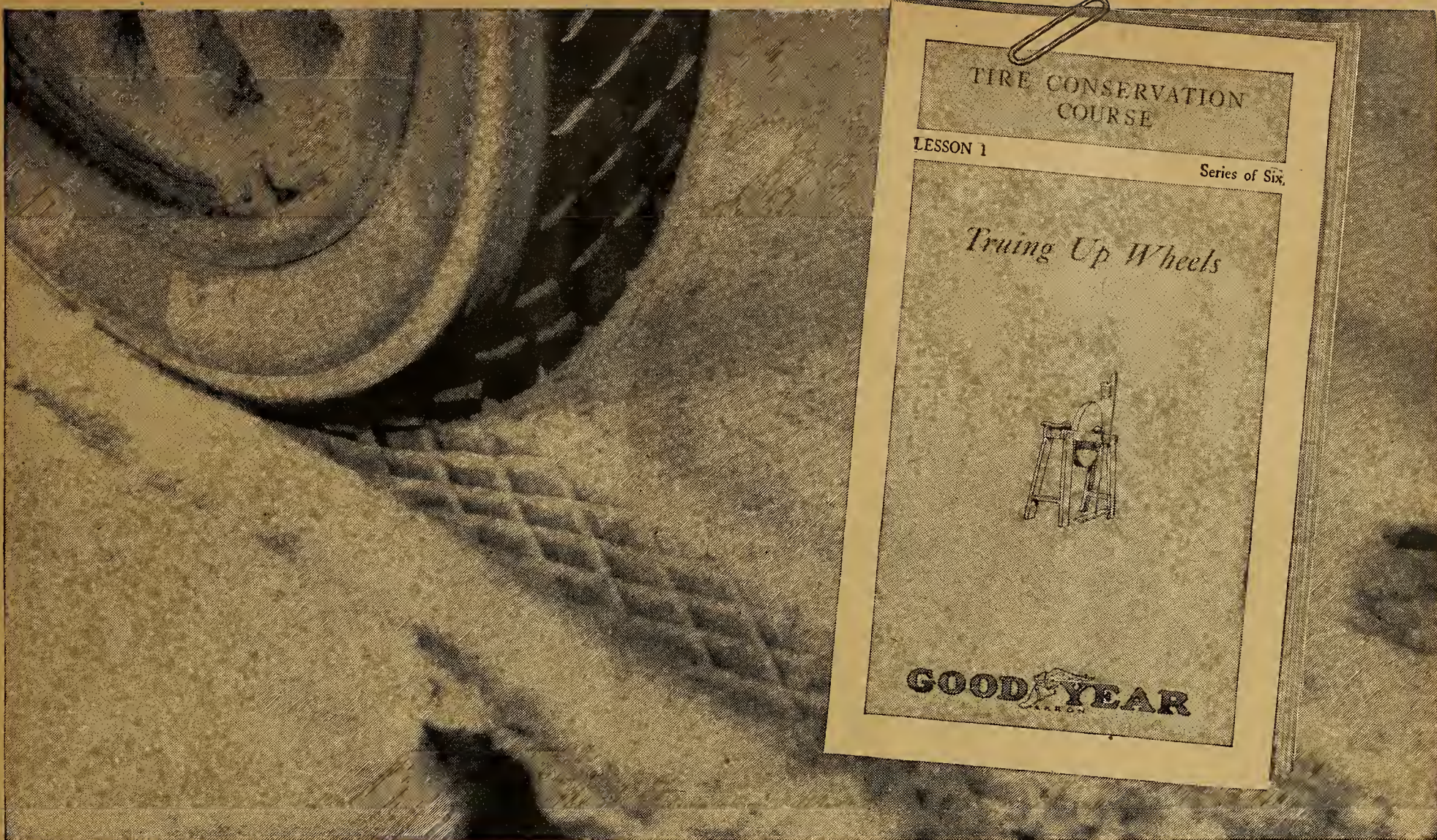
Cleveland, Ohio, holding some remarkable re-

ports made in concourse flights, having won the 500-mile race several

times before entering the service.

Airplanes carried pigeons, and in fact every army aviator that went aloft carried one of these feathered friends with him. After the observer made his notes behind the enemy's lines, the message was attached to the bird and liberated. Meanwhile, should the aviator have been brought down in enemy territory, his message would have been delivered.

Recently, Major Gilkeson, army aviator, liberated a pigeon while on his non-stop return to Dayton, Ohio, from Sellersville, Pennsylvania. The bird made the longest flight conceded yet to have been attempted from an army plane, and on a hazy day



Saving 5,000 Miles by "Truing Up" Wheels

A LARGE multi-cylinder car recently came to a Goodyear Service Station in Chicago with the treads on two Goodyear Cord Tires showing evidence of recent rapid wear. The tires had run 8,500 miles, but in the last few days the treads had been wearing down alarmingly. It was found that a recent accident had twisted the front wheels seriously, so that they were out of line. The grinding action due to this misalignment was cutting down the treads so rapidly that in a few days more the tires would have been out of commission. The wheels were re-aligned. The tires ran a total of more than 13,500 miles. 5,000 miles of tire wear were saved in this case by "truing up" the wheels in time. Have your Goodyear Service Station Dealer test your car today for wheel alignment.

ONE car in three has wheels out of line that rob their tires of thousands of miles.

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Misalignment is most common on the right front wheel, because it is most frequently run into ruts and gutters and against curbs.

On others a rim improperly applied, a bent steering knuckle, a worn bearing, or a warped axle may cause a like condition.

A misalignment of only three-quarters of an inch is enough to reduce by 5,000 miles or more the life of the best tires.

Only the most careful measurements can detect the condition.

Ask your Goodyear Service Station to inspect your car today.

Ask also for Lesson 1 of the Goodyear Conservation Course, dealing with the detection and correction of wheels out of line, so that you or your chauffeur can in future make inspections when you delay too long your calls at your service station.

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Akron, Ohio

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The Mystery at Glen Cove

Jimmy stubbornly refuses to register astonishment just because it is expected of him, but he's glad to have the mists cleared away by Marie's story

By Howard Vincent O'Brien

I MUST have fallen asleep in my chair, for the sun was shining brightly, and the lobby was filled with people, when I awoke to someone shaking me roughly.

"Come to, you old fossil!" said a familiar voice, and I looked up into the smiling countenance of Steele. "Hurry, now!" he commanded briskly. "Wash up and meet me in the dining-room! I'll have some breakfast waiting for you."

A few moments later I joined him in the dining-room, and between gulps of my coffee I plied him with questions. But to one and all he remained smilingly obdurate. "Wait, my boy," was all I could get out of him.

"Confound it, Steele," I expostulated, "you're as mysterious as all the others in this affair! First thing you know, I'll be believing you a grand duke in disguise."

There was a suppressed air of excitement about him which insensibly communicated itself to me. The notion grew that we were on the eve of some sort of revelation.

"Have you found any light in the darkness?" I demanded, as we rose from the table. He nodded mysteriously.

"In twelve hours, Jimmy, you'll be able to go back to the Cove and your golf, and forget that you ever had anything to do with one of the biggest—" He broke off suddenly. "Stow your tongue, for the present, old boy!" he ordered brusquely. "There's one thing more. And there's no time to be wasted. Come along!"

With that he set off at a smart pace, with my poor old bones creaking painfully in his wake. I found myself presently in a taxi. Steele was smoking thoughtfully in his corner, and to none of my entreaties for enlightenment would he vouchsafe a word.

In a few moments we drew up before a distinguished building. My eye caught the sparkle of sunlight on the coat-of-arms over the door, and I whistled.

"Why," I exclaimed, "this is the—"

"Sure," he replied, taking me by the arm. "Beautiful building, isn't it? One of the finest embassies in Washington."

Before I could find my tongue again we had ascended the broad steps and entered the somberly beautiful precincts of a building from which, in times past, have radiated many strange threads. On this spot of foreign soil, redolent with the majesty of a great government, the destinies of millions had been determined.

I felt awed, and must have showed it. Steele, on the contrary, seemed filled with a scarce-concealed cheerfulness. He hummed softly under his breath, and in his eyes was a sparkle I would have given worlds to understand.

"Would you please—" I broke off suddenly, my jaw hanging. The curtains at the end of the room parted, and a familiar figure stood before us.

"Good morning!" the newcomer said easily. "Abominable hour to wake a man, Steele."

"You don't blame me?"

"Not in the least." What was there between these two men that enabled them to chat like old friends? I felt hurt at being so utterly left in the dark. My chagrin must have been evident, for Steele turned to me with a look of contrition.

"I beg your pardon, Jimmy, let me present—"

"That will not be necessary," I replied stiffly. "Mr. Carter and I—er—spent the evening together last night."

To my amazement, Steele exhibited no astonishment.

"Yes, of course. But you don't understand, Jimmy. You met Mr. Carter. He died last night. Allow me to present Captain the Honorable Ansley Charteris, R. N."

It seemed to me that I was expected to exhibit amazement, like a child with a new mechanical toy. I refused obstinately. I merely nodded my head politely, as if the precise name the dark-eyed young man chose to wear was of no particular consequence to me.

Steele looked a little piqued at my reception of his news, but "Carter" seemed to sense what was in my mind. His lumi-

nous eyes twinkled, and his mouth twisted humorously.

"It's a fact," he said with a sincerity I could not question. "That's my real name. But that doesn't interest you. It's who I really am, I take it?"

I shrugged my shoulders. If they were going to make me the butt for their confounded mysteriousness, I should make no effort to assist them. A yawn escaped me—

"Come!" was the single word ripped from Steele's mouth.

He seized me by the arm, and we hustled down the embassy steps and out to a waiting taxicab.

"Forget the speed laws!" was his command as he leaped into the vehicle, after thrusting me in bodily before him.

The driver took him literally. We shaved the paint from lamp posts, and went around

Steele made me turn. He was grinning imbecilely.

"Let me present you to the in-the-very-near-future Mrs. Steele!" he cried.

I bowed, murmuring some vague words of felicitation. I fancied that Steele's face fell a trifle at my rather cold reception of his intelligence, but she, with her feminine intuition, merely smiled.

"You are not pleased?" she asked, addressing me directly.

I suppose I must have reddened, because she came over to me suddenly, putting her little hand on my sleeve in a gentle fashion that I considered absolutely unfair.

"Perhaps—if you knew—" she began wistfully.

I am a soft-hearted idiot, and my intellect, transmuted into dynamite, would not lift my hat. I am a credulous old fool, and no one knows it better than myself. The sight of those amethyst eyes, veiled in such very real tears, and the sorrowful appeal of that gentle voice were altogether more of a strain than my poor common sense could stand. Utterly beyond my control, my arm went out around her shoulders.

"I don't give a damn what I know or I don't know," I blubbered, like the ridiculous ass I am. "You're a sweet, gentle woman, and—and I hope you won't mind if a silly old codger, old enough to be your grandfather, ventures to give you a kiss!"

Whereat the mist over her eyes became the frankest kind of tears, and I had to blow my nose like the safety valve of a boiler.

"Nevertheless, Jimmy dear," she said softly, "I think you've got to hear the whole thing—that is, as far as I know it."

"Don't tell me anything!" I commanded.

"I don't want to hear it."

She laughed that liquidly silver laugh of hers.

"I'm afraid you'll be disappointed in my story. My past isn't nearly so black as I know you think it is."

"It isn't black at all!" I protested stoutly.

"It is black enough," she replied shortly. A kind of cloud seemed to settle over her exquisite features, and for a moment she was silent. Then she sighed, and a smile glinted in her lovely eyes.

"After all," she murmured, as if to herself, "the blackest part was in not being able to speak of it, and to see the peril of those who tried to find out."

"That's all past and gone now," I saw Steele's hand steal to hers as he spoke.

"All past, dearest," she whispered. "And perhaps, one day, I shall forget. . . ." Her voice trailed off into silence. Then, after a moment, she seemed to recall my presence. "But Jimmy is aching for the story," she cried.

"Please—" I protested. But she waved objections aside.

"Oh, but I must. Now, if you will be very quiet and not interrupt—"

"Not a word."

"Very well, then." Her voice became curiously impersonal, and I could see in her eyes, before she let them close, a far-away look. "I was born in England, of a very good country family, as such things go. It was a thoroughly English family, but somewhere in its progress there had entered some wayward Latin strain—which cropped out in all its vigor in my unfortunate self. The commonplace, unadventurous life of the countryside was distasteful to me. Almost from the time I was able to walk I was rebellious. The rigid conventions which to my people were almost sacred were to me merely stupid."

"The empty life of a debutante was intolerable, and having discovered in myself a certain talent for sculpture I threw myself into the work with a vigor, and presently found myself, for an amateur, fairly successful."

"I quickly outgrew the capabilities of my local teacher, and even London I looked upon as provincial. Nothing would satisfy me but Paris. In time I prevailed against the tearful wishes of my family, and finally took up residence in the French capital, in the home of distant connections of our family."

"Nominally [CONTINUED ON PAGE 40]



Such matters are too intimate for observation, and I turned discreetly toward the window

not an affected one either. The captain grinned broadly.

"I don't blame you a bit," he cried, apparently reading my mind with that uncanny perspicacity of his. "And you mustn't blame your friend Steele, either. You see, the rascal got into things so deep that he wanted to go deeper. And the only way he could do that was by giving his word to hold his counsel. Now, of course, it will—" He was interrupted by a knock on the door, and a servant to say that he was wanted on the telephone.

He left us then, and I turned to Steele. But the questions on my tongue were unasked. My friend was manifestly suffering from a pent-up emotional pressure that made me refrain from speaking. He was as nervous as a cat. At intervals he strolled to the window and back, lighted cigarettes, only to toss them away, and chewed his finger nails like a maniac.

The eagerness with which he wheeled at the captain's return was not lost upon me. But there was no word spoken. The dark-eyed young man merely nodded smilingly. It seemed to be the signal for a kind of mental conflagration.

What Has Gone Before

THE whole thing started at a dinner party at the home of Admiral Debreth. A stranger named Carter was there; Agatha Burchard, a young debutante, brought him. During the evening he was called to the telephone by the Japanese butler, Toguchi, and while there was shot. During the excitement created, Marie Brandt, an attractive young widow, disappeared. The whirl of events led Leslie Steele, a bachelor, young and in love with Mrs. Brandt, and his friend Jimmy to take a hand. They pursued fleeing automobiles, were themselves pursued, discovered a strange man in some way connected with the mystery who had been chloroformed, found Marie Brandt, only to lose her again, were taken into custody by the United States Secret Service, escaped, made their way back to Glen Cove, where Steele was called away by Marie and Jimmy was later summoned to Washington to meet Steele. On his way there he encountered Toguchi, and followed him to a saloon, where he saw Toguchi and the chloroformed man shot by Carter. Carter was taken to police headquarters, but released when they learned who he was. Jimmy, bewildered at their easy dismissal of a murderer, went to the hotel to meet Steele.

curves like a gyroscope. Speech was impossible.

In a few moments the wild ride came to an end, as we drew up at a fashionable apartment hotel.

He handed his card to the maid who answered his ring, and she disappeared. In a moment she returned.

"Will you wait five minutes?" she asked. Steele nodded, and sat down, nervously twisting and untwisting his long sinewy fingers.

I stared at him perplexedly. But at my half-spoken query he merely shook his head. "Wait!" was all he would say.

A moment later a door at the end of the room opened, and Marie Brandt, her face bathed in a kind of radiance, glided softly in.

"At last!" breathed Steele, his voice trembling. She came to him without hesitancy, and I knew at once that whatever veil held them apart existed no longer. Such matters are too intimate for the observation of anyone, least of all an ill-tempered bachelor of advanced years, whose opposition to the idea has been explicitly candid, and I turned discreetly toward the window.

But a word from



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PAINT VARNISH ROOFING & RELATED BUILDING PRODUCTS

By J. H. McAdams

The sample card shows that Burkholder on this day spent ten hours plowing for 1918 wheat on field E, with three horses hitched to a sulky plow. Field E 1918 wheat would therefore be charged with ten man hours, thirty horse hours, and ten equipment hours of labor. This and other labor charges are entered against the field from time to time as they occur, but no money value is represented till time to close the books.



An actual photograph of a part of the Dixie Highway, Illinois, before Tarvia was used.



The same road showing what the use of "Tarvia-X" has done. Note smooth, dustless surface.

How One Farmer Carried the Bond Issue—

A WELL-KNOWN County engineer tells this story, and it's the best good-roads story we ever heard.

He says the county was in terrible need of better roads. The mud all through the district was so deep that it was impossible to use wagons, all traveling being done either on foot or horseback.

In spite of the need there was little enthusiasm for good roads when the Board of County Commissioners met. Everyone was afraid of the presumed high cost and increased taxes.

A farmer in the back of the room arose.

"Mr. Chairman," he said, "I ain't fit to address a dignified meeting like this, but that's because I've had to travel for ten miles over the kind of roads you give us.

"I couldn't drive, I had to ride horseback.

"My boots are covered with mud; my trousers are covered with mud;

my coat is covered with mud; my hat is covered with mud; and if I hadn't stopped to wash it my face would be covered with mud, too.

"I look as if I had crawled here on my hands and knees, and I'm only half through because I've still got to go back, with five dollars' worth of groceries that I bought from brother Fletcher.

"If there had been a good, hard road that my old horse could climb up and draw in a load of lumber that I've got ready, I would have bought twenty-five dollars' worth of groceries instead of five dollars' worth, and there would have been that much more money in town tonight."

And the mud-covered farmer sat down!

Other speakers took up his case. They pointed out that good roads were an *asset* instead of a *liability*; an *economy* instead of an *expense*; that they brought money into a town and greatly increased the markets.

The result was that the Commissioners enthusiastically passed a resolution to issue bonds enough to give them several miles of good roads.

Today, the county is more prosperous than ever, school conditions are better and the amount of traffic going in and out of the town has increased several hundred per cent.

The old-time hostility to good roads by taxpayers is fast passing away. Mud holes may look cheap, but they are the costliest thing any community can have around.

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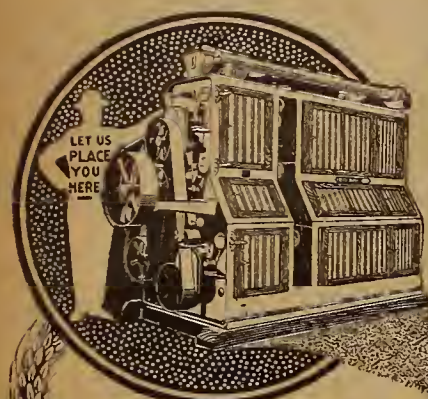
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It Pays to Drive Carefully

By C. E. Gouveia

EVERY one of the readers of this article would be highly insulted if they were told that they didn't know how to drive their car. I know I would be if someone tried to tell me that, even though I consider myself far from an expert. But let's think a minute. Do you really know driving?

The salesman who sold you your car probably gave you a lesson or two, and then turned you loose to go it on your own hook. Whatever you may have learned since he dropped you came from practical experience. That is a mighty good way to learn, but it also allows one to form habits that seem perfectly all right, but which are anything but that, as the upkeep and repair bills show.

There are all kinds of drivers—good, bad, and indifferent. Some are over-careful, others are absolutely reckless. The man who is always driving fast; making fancy turns and quick stops, besides being a dangerous person in the community is playing havoc with his machine. Investigate a trifle and you will find that he has a whale of a tire bill.

Courtesy to other cars and horse-drawn vehicles you may meet or have occasion to pass on the road is one of the first essentials of good driving. Remember they have just as much right to use the highway as you have. Don't cut closely in front of a machine you have just passed. When I say this I speak from experience. While driving one evening, another car passed

me, and in doing so cut in so closely as to catch the hub cap of my front wheel in the rim of its hind wheel. Fortunately I was traveling slowly, and, while the impact jerked the steering wheel out of my hands, I was able to recover the car quickly enough to keep out of the ditch. But it taught me a lesson, you may be sure, and I resolved never to give any other driver the same sensations I experienced for a few seconds.

The wet, rainy days of spring are now with us. If you are contemplating a trip, or even if you just intend to use the car around home, better take your chains with you. Many a bad accident has been avoided by the use of chains. Non-skid tires help some, but on a wet pavement the tire chain is the only safe bet. It's not a good plan to try to stop quickly on wet paving, as a skid will surely be the result. Apply the brakes with the clutch in, as braking against the power of the car tends to straighten it up.

A good driver, in order to be classed as such, needs to have more than the ordinary amount of foresight, especially in congested city traffic. Your mind has to be about two jumps ahead of the other fellow's. Then, when the time comes for you to act quickly, you will have had it all figured out and know just what to do. Watch the traffic signals. They are placed there for your own safety. Learn to look ahead and anticipate what is going to happen. Be ready for any emergency, and don't take chances.

A Hint About the Clutch

By Russell Adams

RACING your engine will not help you any when the clutch is slipping. It only makes a bad matter worse. It will not make the car move any faster, and there is always a big chance that the speed and friction will burn out the clutch facing entirely. The better plan is to operate the engine slowly, giving the flywheel a chance to carry the clutch around with it, in which case it will hold if you don't give her the gas too quickly.

If you have a cone clutch on your car, examine the facing the first chance you get. You will probably find this smooth and slick, which is the reason it wouldn't grab like it should. Gasoline will remove this glaze, and the leather should then be oiled with castor or olive oil, which will soften it. If the facing is badly worn, and you must use your car, an application of fuller's earth will make it hold for several hundred miles, but eventually it must be replaced.

A slipping clutch of the plate variety can usually be adjusted by tightening the tension springs, unless it is badly worn, when of course the plates will have to be renewed.

How to Double Your Load

By Earle W. Gage

"OUR truck trailer pays profits in war or peace times," said a progressive truck farmer of New York, who makes it his business to deliver his produce fresh with the dew of the field to city consumers. "We can take twice the load with the same amount of power, in the same time, with but one driver. Therefore there is no additional outlay for another truck, another driver's salary, or for gasoline, which means that our trailer has cut our expense in two and doubled our delivery service. The only additional cost was a small one for the trailer, which is hitched on behind the farm truck."

The motor truck will not develop more than one half of its drawbar pull in pounds when loaded. A three-ton truck will not only carry its three-ton load, but still has excess power enough to haul from 12 to 51 tons behind it over a good, improved highway. Of course, any good truck must exert ten times as much power to pull its load over a sandy road as it needs over asphalt. The man choosing a trailer must figure according to the road he will most frequently use.

This truck farmer figures that it costs

him \$14 a day to operate his truck, anyway, and that it earns him about \$24, or a profit of \$10. By adding a trailer his cost was increased \$2 a day, but it also made a daily profit of \$18 instead of \$10, or an increase of 80 per cent. This may not work out the same in all localities, where highways are not so good and where operating costs are higher, but there are few sections where the roads are bad enough to leave the truck owner no profit.

There is little service received from using an ordinary wagon as a trailer. The trailer should be designed and constructed with as much care and skill as is employed in motor-truck manufacture. It should have a short wheel base, capable of carrying its rated load at maximum truck speeds. It should have a steering mechanism at one or both ends, so designed that one or more trailers will track automatically, and be guided by it without lateral strain on the truck. The drawbar between truck and trailer must contain coil springs that go into compression both on the push and the pull. The drawbar should pull through the frame, and not off the front axle. The automobile type of knuckle steer must be used, and not the ordinary wagon fifth wheel. It should be equipped with roller bearings to insure light draft and obviate the burning out of spindles and hubs, due to motor-truck speeds. Provision must be made for perfect lubrication at all times.

Making Roads with Brains

AS HELP is scarce, and increasing traffic makes good roads a necessity, more and more of the heavy work incident to highways is being done by machinery.

At one time the work of leveling and road-building had to be done largely with the pickax in the hands of workmen, and with shovels and teams. Now gasoline engines, motor trucks, and huge power-propelled cranes do all of the heavy work. In the new method the expense is less than by the old method, for machinery is always cheaper than human labor, in that a material saving of time is effected.

Good roads are an economy to any section of the country, as they permit produce to be hauled to market just when it will bring the most, and property is always worth more which borders well-constructed highways. Try to buy a farm along a concrete road and you will find the location makes a big difference in the price asked.



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Our Prices and Our Policy

The list prices of the Paige five-passenger Six-39 and seven-passenger Six-55 models have been definitely fixed at \$1555 and \$2060 respectively. These prices are based upon the present cost of high grade materials and skilled labor. It is our conviction that there can be no further reduction in motor car prices for many months to come.

As every business man knows, labor is the element which determines the cost of any manufactured product. It is, in final analysis, more than 90% of a production investment. A ton of ore in the ground is worth 75 cents. When it has been mined, transported to the mill, converted into steel, forwarded to the machine shop and fashioned into automobile parts it is worth \$1500. And practically every penny of the enhanced value is a labor charge.

The same thing is true of farm products. The bushel of wheat that formerly sold for ninety cents now brings two dollars and twenty cents, because of the greatly increased cost of production. Until we have cheaper wheat it is idle to think of cheaper flour or bread.

So it is quite evident that the cost of labor must come down before commodity prices can be reduced. Furthermore, it must be a *general* reduction of the wage scale—a National movement. And the process, as we see it, is going to take a long time.

Both the farmer and skilled mechanic are receiving

greater rewards than ever before. But no men have a better right to fair compensation, and they will undoubtedly continue to receive it. Where, then, can the manufacturer look for a reduction in his manufacturing costs?

As we have said, the list prices of our cars have been definitely fixed. These prices represent intrinsic value—the choicest of manufacturing material and highly skilled workmanship. Without a sacrifice of our own quality standards it would be absolutely impossible to produce such cars for one dollar less.

The point we want to make is this: We could not afford to build and you could not afford to buy on any other than a quality basis. In brief, while we agree that first cost is an important consideration, we are convinced that *ultimate* cost is vastly more important.

We believe that the only true test of economy is years of hard, gruelling service on the road.

We believe that freedom from repair bills and excessive depreciation is infinitely more desirable than a mere catch-penny list price.

These are our convictions. We have held them staunchly during many fitful periods in the motor car industry. So long as the Paige Company is a factor in the making and distributing of motor cars we shall continue to adhere to them.

The Linwood "Six-39" 5-Passenger—\$1555 f. o. b. Detroit

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PAIGE-DETROIT MOTOR CAR CO., DETROIT, U. S. A.

Let the Bees Build Your Bank Account

[CONTINUED FROM PAGE 9]

you have your colonies of bees at your command any time of the season. The new hive differs from the old in that it has frames that are removable, and for this reason it is easily manipulated. Formerly, with the old box hive, one could not get in to investigate or clip the queen's wings. To-day we can clip her wings without difficulty, and so prevent swarming.

"Let me tell you some of my own experience and a bit of what I have learned therefrom," the doctor goes on. "I started in with two colonies averaging from 50,000 to 100,000 bees each. At present I have 102 colonies of more than 8,000,000 bees. To the care of these industrious insects I devote but one day a week, the year around.

"In May I take my bees out of winter quarters, which may either be a dry cellar or the back yard where the hives have been carefully covered with straw or an old blanket. I look them over carefully, see that there is a queen in each hive, and that they have stores enough to keep them until the clover begins to bloom or the flowers appear.

"During the summer months—the honey season—the queen lays an average of 4,000 eggs a day. This is what makes strong colonies. With a good, prolific queen it does not take long to have a surplus of bees to go into the honey flow and gather nectar from the flowers. You can tell very quickly if you have an enterprising queen by the way the honey is coming into the hive—fast or slow.

"A hive colony should average 100 pounds of surplus honey a year. By surplus is meant the amount of honey over and above what the bees must have for food during the winter months and to breed upon in the spring until the welcome flowers appear again.

"The production of honey is somewhat a matter of location. Some colonies in out-yards where flowers are abundant or where sweet clover or buckwheat is obtainable will run as high as 200 pounds surplus, whereas a colony in the city will run only 30 pounds, for brick and mortar yield small nectar.

"It is well to place one's out-yards—assuming that the breeder is now well launched into the industry—from five to six miles apart, for the bee will fly half of that distance to gather nectar. They have been known to fly six miles for nectar and bring it back to the hives; but half of that distance is about the average.

"Assuming one's colonies to be normal and his queens to be prolific, his hives ought to bring him a profit of \$25 each. A man with 100 colonies can dependably figure on \$2,500 profit on his work, which lasts from the first of May to the last of September—a short season. This is the only period of the year when the bees require attention. However, he must see that his little workers are supplied with food enough for the long winter months. In case a colony—one that would be short in winter's stores—gives a late swarm in September, and do not have enough food for cold weather, the keeper can supply the bees with a little sugar dissolved in boiling water and feed it to them the last week of September or first week in October as a syrup, and they will winter on it as well as they would on their own honey. The sugar is dissolved in a pan and placed just outside the hive in case one does not use the roller entrance bottom board.

"The best feature of the roller entrance bottom board—one of great importance to beekeepers—is that it is so constructed that the queen bee cannot get out. Thus the other bees will not cluster on your neighbors' trees, but will return to the hive and to their beloved sovereign. The contrivance also sifts out the drone bees, and automatically cages them in a separate compartment, where they die. The economic value of the drone-trapping feature of the roller entrance bottom board will be appreciated when one realizes that it takes seven worker bees—wives or sisters, if you like—devoting all their time to the job, to support one drone."

"During the winter I find it a wise plan to make my own hives for the next season. They are simply made. If a man starts with ten, the next season he ought to have twenty, for bees increase their numbers at about the rate of 100 per cent a year. With the big demand and high price for honey to-day it would be a good scheme for the beginner not to depend wholly on the natural growth of his business, but to invest his profits in new colonies."

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Railway and Land Co.'s are offering unusual inducements to home-seekers to settle in Western Canada and enjoy her prosperity. Loans made for the purchase of stock or other farming requirements can be had at low interest. The Governments of the Dominion and Provinces of Manitoba, Saskatchewan and Alberta extend every encouragement to the farmer and ranchman. You can obtain excellent land at low prices on easy terms, and get high prices for your grain, cattle, sheep and hogs—low taxes (none on improvements), good markets and shipping facilities, free schools, churches, splendid climate and sure crops.

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Canadian Government Agents

The Successful Farm Sale

By W. A. Freehoff

WHILE there are many factors which contribute to the success or failure of a farm sale, the weather is the only one that is not in some measure controllable. A farm sale I recently held was particularly satisfactory, for which in part I thank the weather man. The experience gained in this sale, and the observations gleaned from others, have taught me several things.

Of one thing I am now convinced—bill-board advertising is not essential. I had only 25 posters printed, and most of these were not posted. I depended on a well-displayed advertisement in the local paper, while a well-printed circular was sent to every man in the county known to have Guernsey cattle—the breed sold. This list was obtained from the secretary of the local association, and was sent sealed so as to insure the letter's being opened. Open circulars are too often discarded without being read.

Another experiment I tried was selling the obvious culls among the cattle to the butcher before the sale. Culls seldom bring their beef value in a sale anyway, while their presence detracts from the good cattle. The herd was tuberculin-tested three days before the sale, thus making possible a guaranty of the health of the offering.

All of the machinery was put in as good repair as possible, and grouped so it could be examined easily before the sale. It so happened that the high price and scarcity of new machinery increased the demand for used tools; accordingly, many of the implements brought prices out of proportion to their cost a few years ago.

I made sure, well in advance, of the best auctioneer in the county—a man who had a large local following and who knew a large number of the men present by their first names. An unpopular auctioneer or one not acquainted with the peculiarities of his crowd works under a great handicap. A charge of 1½ per cent for his services was made, and he was worth more. The total expense of the sale was only about \$75, which I consider reasonable for a \$3,500 sale. The auctioneer was a rapid worker and finished the sale in only a little more than two hours.

I made it clear at the start that nothing would be "protected." Everything was let go whether it brought full value or not. A crowd of shrewd farmers is quick to detect any price-manipulating on the side, and will stop bidding, with the result that the close of the sale will see a lot of junk left on the owner's hands. In only one instance did I buy an article—a nearly new cream separator upon which there was a bid of only \$5. To prevent such a sacrifice I openly announced my own reasonable bid of \$25.

After my sale was concluded, settlements made, and the results found to exceed my expectations, I felt that a little account of how the sale was prepared for and conducted might add to the success of some sales that would be held in the future by FARM AND FIRESIDE readers.

Labor at \$8 a Day

By C. E. Davis

WE HEAR from time to time some complaint of conditions resulting from war measures. But before complaining any more just read this letter written by Mrs. Abigail Adams, wife of the second President, on June 8, 1779:

"I have been able to supply my own family sparingly, but at a price that would astonish you. Corn is sold for \$4, hard money, per bushel. Labor is \$8 per day, and in three weeks it will be at \$12, it is probable. Goods of all kinds are at such a price that I hardly dare mention it. Linens are sold at \$20 a yard; the most ordinary calico at \$30 and \$40; broadcloths at 40 pounds (\$200) per yard; West Indian goods fully as high; molasses at \$20 per gallon; sugar \$4 per pound; Bohea tea at \$40, and our own product in proportion; butchers' meat at 6 and 8 shillings (\$1.20 to \$1.60) per pound; board at \$60 per week!"

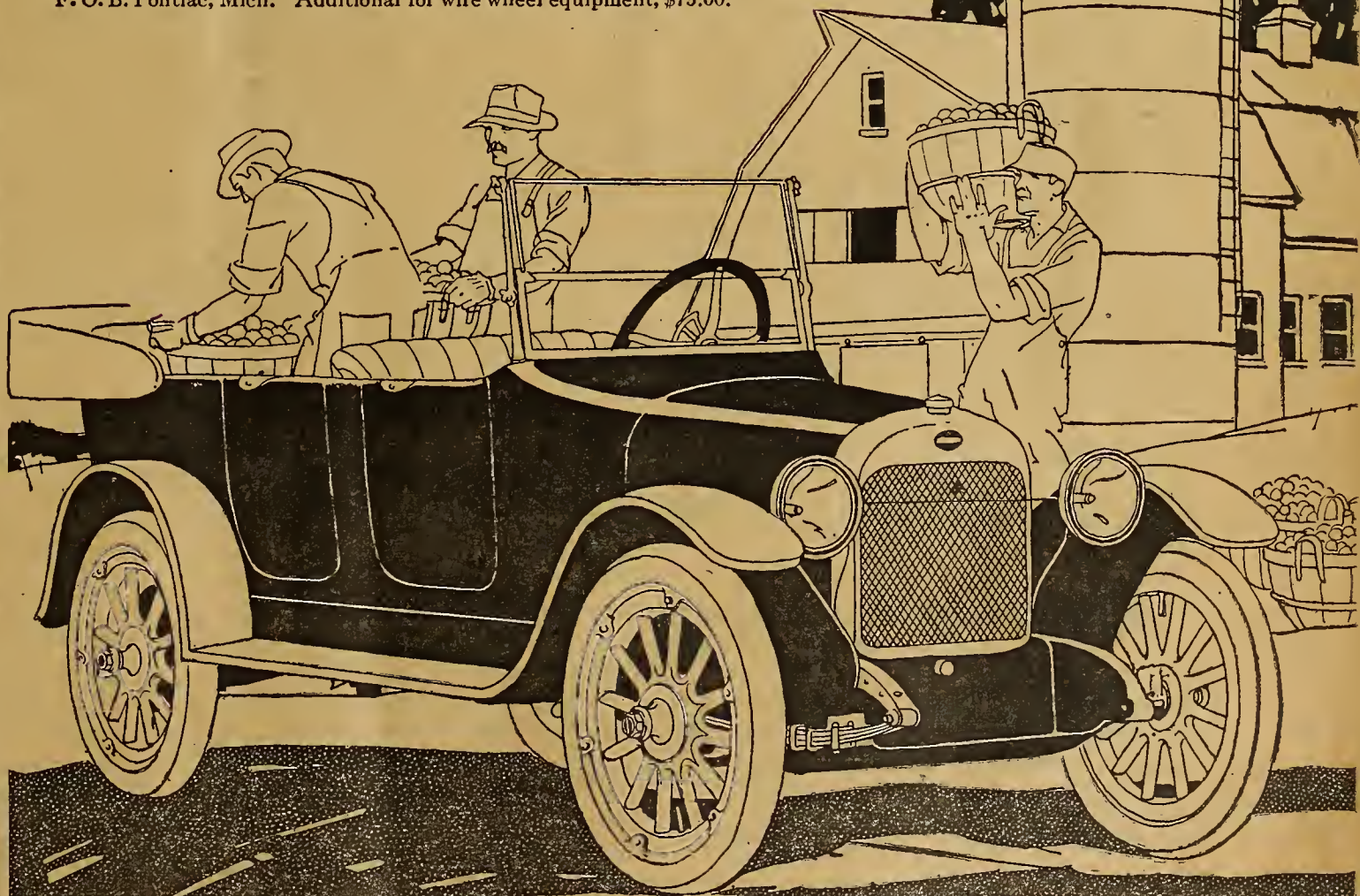
And yet these pioneers, with full confidence in God and these United States, worked hard, utilized every bit of home-grown produce, and were content to live plainly for a time without anarchistic grumbling or strikes; and the glorious plenty of after years justified their faith, carefulness, and patience. We can look back to those influential progenitors of our present mighty nation and learn a lesson of patriotic living which should nerve us to do our part uncomplainingly.

THE biggest reason why your car this year should be an Oakland Sensible Six is the Oakland Sensible Six itself. In design it is the most advanced example of the prevailing principle of high power and light weight construction. In value it represents an accomplishment possible only with Oakland's immense volume of production and its policy of concentrating all its energies upon a single chassis type. In performance it affords that rare combination of reliability and thrift which is the aim of truly efficient engineering. More than 100,000 Oakland Sensible Six cars are now in use. Everywhere, they are delivering the kind of service you have a right to expect from an exceptionally good automobile.

The Oakland Sensible Six Touring Car is unusually roomy and comfortable, having a full 106 inches of body room upon its sturdy and serviceable chassis. Powered with the famous overhead-valve Oakland Sensible Six 44-horsepower engine, it delivers owners mile-ages of from 18 to 25 per gallon of gasoline and from 8,000 to 12,000 on tires.

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OAKLAND

SENSIBLE SIX

DU PONT AMERICAN INDUSTRIES



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Good roads mean good markets to the farmer. They mean increased trade between the farm and the city home. They mean higher profit to the farmer; they mean farm to home sales for eggs, poultry, pork products, vegetables and all farm produce.

The war is over. The millions of dollars that we have been spending on engines of destruction can now be expended on civic improvements, and if there is any one thing above all others the war has taught us the need of, it is good roads.

Now is the time! Thousands of returning soldiers and thousands of ex-munition workers are now available to furnish the necessary labor.

Back The Better Roads Movement!

You know what it means to you. You know who has the power to make good roads appropriations in your locality. See that this body acts!

The day of the heavy motor truck is at hand. Its economical use spells good roads. Good roads in turn spell prosperity for the farmer, lower cost of living for the city dwellers. Everybody benefits. The laborer is employed; the farmer comes in direct contact with his market; the consumer deals direct with the producer of his food.

If interested in this idea, write us for our Road Construction and Maintenance Booklet No. 90. It's free. It will give you a lot of valuable information on this timely subject.

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DU PONT

Mrs. Murphy and the Princess

[CONTINUED FROM PAGE 8]

her! I guess maybe they won't feel sore when they find out she's tricking them!"

"Sh!" softly admonished Mrs. Terry. "Pshaw! I ain't a-going to tell. I'm going to pay my respects to Princess Athena too." And she waddled across the room.

The next morning Mrs. Murphy reclined languidly on a divan in her luxurious boudoir. Her lace-trimmed pink satin negligée failed to conceal her elephantine, corsetless dimensions. A pink cap of the same materials brought out the ruddy glow of her matutinal countenance. Very few of her intimates had ever seen the early morning face of Mrs. Murphy. It was dedicated to her boudoir.

She raised herself heavily on her elbow and rang for her maid.

Under Bates's efficient touch a transformation was effected. The poppy hue of her face became the delicate cream of the tea rose. With the aid of additional tresses and the curling iron her thin, drab locks became a crowning glory. Magically her huge bulk became a not too noticeable embonpoint.

As Bates labored, her mistress became loquacious: "I'm expecting Miss Bernoff. She's coming to spend the day. I'm mighty fond of that girl. I couldn't think more of her if she was my own daughter. D'ye notice how Mountford's taking to her too?" She expected and awaited no answer. "He hasn't been to a dance nor any other affair since she's been here, but he's Johnny-on-the-spot all right when she's around, and," confidentially lowering her voice, "I know she likes him just as well." She spoke with a how-could-she-help-it air.

When Olga lightly entered it was as though the windows had been opened to let the gentle breezes of spring cool the heavily perfumed atmosphere. She was charming; an ingenuous child whose artless prattle and impulsive manner won all hearts. She was bubbling with irrepressible vitality. She couldn't make her curls nor her eyes behave. Knowing her, one could not possibly treat her as a princess. Indeed, some days before, Mrs. Murphy had abandoned her hopeless effort at ceremonious titles. Under the magnetism of Olga's captivating simplicity the thin veneer of artificiality peeled off, and she became the big-hearted Kate Murphy of less prosperous days.

"Mountford's home. He's coming with us."

"Goody, goody!" Olga clapped her hands. She was fast becoming Americanized. Under Mrs. Murphy's mischievous scrutiny a slight flush spread over her face.

"He asked for his holiday to-day instead of to-morrow. I don't know why," and she cackled in enjoyment at Olga's confusion.

THEY descended the stairs. Mountford, khaki-clad, straight-limbed, sunny-faced, was waiting in the hall to greet them. Affectionately he kissed his mother and turned to Olga. The expression of his countenance left no doubt of his adoration. Her face, in turn, expressed the beauty of the dawn which holds forth the promise of a glorious day.

The two young people were silent as they motored through the park, along the surf-pounded beach, and out into the ever-green perpetual summer of California. The brilliant toyon and madrone berries gave the only suggestion of autumn. The slender eucalyptus and wide-spreading oaks, standing in fields of yellow backed by purple hills, were ever garbed in wondrous greens, as though always ready to receive with ceremonious courtesy the admiration of the passing motorists.

However, no beauty of nature could cast a spell great enough to stay Katie Murphy's chatter.

"I'm thinkin' that in Tenravia, where you come from, ye wouldn't be seein' green trees nor be ridin' in open automobiles in November."

"No, indeed! There never could be anything like this anywhere else!" rapturously, losing sight of the fact that, in the icy depths of Siberia, were the conditions the same, spring would have bloomed perennially in her heart.

Luncheon broke the spell. Mountford and Olga became two prattling, giggling children.

Mrs. Murphy beamed affectionately on them. When she had sought to corner Olga's companionship with a view to a monopoly which would establish her supremacy in society, she had not considered

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30 x 3 and 30 x 3½ sizes only—Ford Sizes. More than 50,000 cars equipped with them in 6 years.

Big Money in becoming our exclusive dealer in your county. Tire experience unnecessary. Write today for terms.

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Boys and young men everywhere are making good money taking orders for "Ranger" bicycles and bicycle tires and sundries.

You are privileged to select the particular style of Ranger bicycle you prefer: "Motorbike" model, "Arch" frame, "Superbe", "Scout", "Special", "Raer", etc. While you ride and enjoy it in your spare time hours—afternoons, after school, evenings and holidays—your admiring friends can be easily induced to place their orders through you. Every Ranger sold takes with it our 5-year guarantee and the famous 30-Day Trial agreement.

Factory-to-Rider. Every purchaser of a Ranger bicycle (on our factory-direct-to-the-rider sales plan) gets a high-grade fully guaranteed model direct from the factory at wholesale prices, and is privileged to ride it for 30 days before final acceptance. If not satisfied it may be returned at our expense and no charge is made for the use of machine during trial. **Delivered to You Free.** We prepay the delivery charges on every Ranger from our factory in Chicago to your town. If you want to be a Rider Agent or if you want a good bicycle at a low price, write us today for the big free Ranger Catalog, wholesale prices, terms and full particulars.

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Light-Weight Farm Motors

Cushman Engines weigh only one-fourth as much as ordinary farm engines, but they are balanced so carefully and governed so accurately that they run much more steadily and quietly. Light weight and higher speed mean less gasoline, more jobs, easier handling and steadier running.

4 H. P. weighs only 190 lbs., being only 48 lbs. per horsepower. Besides doing all ordinary jobs, it may be attached to any grain binder, saving a team, and in a wet harvest saving a crop. Also it may be used on corn binders and potato diggers. Very easy to move around from job to job.

8 H. P. weighs only 320 lbs., being only 40 lbs. per horsepower. For all medium jobs. Also may be attached to hay presses, corn pickers, saw rigs, etc. 8 H. P. and larger Cushman Engines are all double cylinder.

15 H. P. weighs only 780 lbs., being only 52 lbs. per horsepower. For heavier farm jobs, such as 6-hole corn shellers, ensilage cutters, large feed grinders, small threshers, etc.

20 H. P. weighs only 1200 lbs., being only 60 lbs. per horsepower. For heavy duty jobs, such as shredders, shellers, grain separators, heavy sawing, etc.

Cushman Engines stand up under wear and tear and do not wear unevenly and lose compression. Every running part enclosed, free from dust and dirt and properly lubricated. Equipped with Throttling Governor, Carburetor, Friction Clutch Pulley and Water Circulating Pump. Ask for book on Light-Weight Engines.

CUSHMAN MOTOR WORKS

807 North 21st Street

Lincoln, Nebraska



Easy to Move from Job to Job

Two Men Can Carry the Cushman 4 H. P.

(283)

the consequences to her only son. Such a contingency as a royal princess marrying an American youth was unheard of.

Followed days when Mountford and Olga, unchaperoned, wandered into the picturesque corners of San Francisco. They climbed Telegraph Hill and silently watched the outgoing and incoming ships. Hand in hand they sat as the brush that painted the glowing sunsets made an ineradicable background on their hearts. At times the mournful fog whistles sounded a wail of warning, but those two were in a fool's paradise. They gave no heed.

All too soon came a day when Olga, pale and tremulous, arrived at the Murphy home to announce that she had to leave for Washington the next day, on secret matters of importance.

Mrs. Murphy was alone. Her first thought was not of her son. Even now she did not realize what a separation would mean to these people. It was true they were attached to each other, but youth is naturally buoyant and recovers quickly from depression.

Nor, to do her justice, did the idea of a relapse from social leadership to a subordinate position influence her. Olga had entwined herself around Katie Murphy's heart, and Katie felt a sudden wrench at the thought of her departure.

There were tears in the girl's eyes as she spoke.

"Dear Mrs. Murphy, I must leave tomorrow. I am called away. I can't go without telling you that these few weeks have been the happiest of my life. I shall never forget you and Mr. Murphy and M-m-mountford!"

"But you'll come back?"

"I'm afraid not. As soon as we have concluded our mission we leave for home." Her voice was quiet with repressed feeling. Suddenly giving way to her emotions, she sobbed: "Oh, I love you so much! I wish I could stay with you always!"

"Dear heart, don't grieve." Their tears mingled as they clung to each other. Forgetting her ambitions of yesterday, she continued commiseratingly: "There, there," patting Olga affectionately, "don't worry about it!"

"You'll try to think of me kindly when I'm away?" the girl piteously begged.

"Now, child, ye know I love ye. If I had a girl like you I'd be the happiest woman in the world."

Olga made Mrs. Murphy promise not to tell Mountford. She herself must break the news to him.

HE HAD a few hours' leave that afternoon, and he and the girl walked up the slope of Telegraph Hill. Conversation had become superfluous. In silence they watched a steamer sail out through the Golden Gate. As it disappeared through the narrow channel, bound for unknown shores, they looked at each other and sighed.

Suddenly she spoke:

"Mountford, I am going away to-morrow—forever."

"Olga!" He clasped her convulsively to him, forgetting that there were such things as princesses in the world. "You mustn't! You can't!"

"Yes, dear, I must. It is my duty."

"But don't you know I love you with all my heart and soul?"

"I know. And I love you, dear. I shall always regard our love as a great gift, which no power can take from us."

"Olga, you can't mean you're going to leave me! I won't have it!" he added fiercely. "Dear," changing his tone to one of entreaty, "throw up your job! Don't be a princess! Be just an American girl and my wife!"

Gently, reprovingly, she answered:

"Mountford, you don't mean that—you, who are about to become an officer in the United States Army! You hope to go 'over there' to fight, to risk your life, perhaps to lose it and bring sorrow to the lives of those who love you. You love your flag and are willing to sacrifice all to uphold its principles. Shouldn't I hold my native land in the same reverence? Even if I were not a princess, but the humblest subject of my king, it would make no difference. My country calls and I must obey."

"Olga, forgive me!" Kneeling before her, he humbly kissed her hand.

"I can't ask you to forgive me, Mountford. Soon you will hear from me. Then I shall be at liberty to disclose what heretofore I have been forced to conceal. What I tell you will only widen the gap between us. Our ways must part forever."

The pseudo-princess and Olga left the next morning.

Mountford, pale and quiet, seemed to have added dignity to his stature and years to his appearance. Overnight the

[CONTINUED ON PAGE 35]

Why There Is a Scarcity of Hudson Super-Sixes

No Open Cars to Be Built for Months—Hudson Closed Car Demand Exceeds Production

No automobiles were to have been built after January 1st.

Then, all of a sudden, the ban was lifted.

It produced a confusion the trade had never experienced. For months all makers had been turning out all the cars they could, regardless of the immediate market for them. By spring it was believed automobiles would be so scarce that buyers would accept less wanted makes if they could not get the car of their choice.

Then cars that had not sold freely during the summer and fall would have a ready market when the more desirable makes were out of the way. For one thing—

There Would Be No Hudsons Then

That was one of the expected conditions. Super-Six sales all season, just as they have for three years, absorbed the factory output. Hudson dealers were not able to get cars for future needs. It looked as though they either would have to close up shop or take on one of the less wanted lines.

But withdrawal of manufacturing restrictions assured a limited quantity of Hudsons. Less wanted cars after all, would have to meet Super-Six competition.

Hudson production is now concentrated on closed models, for which there is an excess demand. Some dealers have a limited number of open models—though not enough to meet early spring requirements.

You either must take one of the open cars they now have or wait until late spring if you get a Super-Six Phaeton.

Note Why Hudson Is so Popular

For three years the Super-Six has held undisputed leadership among fine cars.

Remember how it first established itself on the speedway and in countless endurance tests. Rivals refused to admit Hudson had developed a new type motor with greater power and endurance.

Yet those amazing records were made commonplace by later Super-Sixes. Thousands of owners made just as wonderful demonstrations with their own cars, when you consider the conditions, as were those under official test. Every car made converts to the Super-Six. Today 60,000 are in service.

It Created Styles that Others Followed

Hudson created the Sedan and the Touring Limousine. Now more expensive cars have followed and cheaper cars, too, are effecting models of Hudson type.

The seven- and the four-passenger Phaetons are pattern cars for so many other makes, that if it were not that the Super-Six is always a year or more in advance of others, one might be confused in recognizing the true arbiter. Two new types are now ready—the Coupe—a four-passenger—and the Cabriolet for three.

Why Delivery Is Possible Just Now

The Super-Sixes now available in open car types are all that can be had for several months. It will be June before full factory production can be resumed.

With the first promise of spring open cars become the favorite type. If you delay, and an open Super-Six is your choice, you will probably find all have been sold. Then you may have to wait until late spring.

The demand for all closed model Super-Sixes is so great that you must speak promptly to assure delivery. With some models this may mean quite a while.

Hudson Motor Car Company

Detroit, Michigan

Its White Triangle and Price are Two of Motordom's Most Distinctive Marks of Value. The Seven-Passenger Phaeton sells at \$2200

(1003)

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No. 25

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sows all garden seeds from smallest up to peas and beans, in hills or in drills, rolls down and marks next row at one passage, and enables you to cultivate up to two acres a day all through the season. A double and single wheel-hoe in one. Straddles crops till 20 inches high, then works between them. A splendid combination for the family garden, onion grower, or large gardener.

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No. 17

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Here Are Seeds of Three Valuable and Interesting Varieties You Should Grow in Your Garden This Year.

Giant Climbing Tomato—Is one of the largest grown. Vines grow very strong and will carry an enormous weight of fruit, very solid, crimson color; specimens often weighing 2 to 3 lbs. each.

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Early Spanish Peanuts—Earliest variety and a great Peanut for the North; easy to grow, enormous yield, and a few hills in your garden will be very interesting to show your neighbors.

Special Offer: I will mail one regular sized Packet of Tomato, Cucumber and Peanut for only 10c, or 3 Packets of each for 25c.

My new Seed Book of Garden Seeds is included free. Order TODAY.

F. B. MILLS, Seed Grower, Dept. 27 Rose Hill, N.Y.



Early Spanish Peanuts



Climbing Cucumber

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is the title of our 1919 catalogue—the most beautiful and complete horticultural publication of the year—really a book of 184 pages, 8 colored plates and over 1000 photo engravings, showing actual results without exaggeration. It is a mine of information of everything in Gardening, either for pleasure or profit, and embodies the results of over seventy-two years of practical experience. To give this catalogue the largest possible distribution we make the following unusual offer:

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PETER HENDERSON & CO. 35 & 37
CORTLANDT ST.
NEW YORK CITY

What I Did When I Lost \$130,000 Farming

[CONTINUED FROM PAGE 7]

Kansas. I set out to develop one section of Texas through the first generation of settlers. I believe I have succeeded. Anyone can do it.

It occurred to me that from a strictly grazing country large areas would eventually have to go in for general farming. I set about to demonstrate the character of farming which would enable the first generation to stick. I got to thinking along dairy lines. I knew that one dairy cow had an earning capacity equal to five or six beef cows. If I could create a market for the product of the dairy cow and the first farmers who came would be enabled to hold on, we should not have to wait for the third generation.

I took to studying dairy breeds. I read everything I could get hold of, and soon discovered that no matter what I was reading, Wisconsin was quoted as the State from which to learn. I found that the average Wisconsin cow produced 160 pounds of butterfat annually. At that rate it would take 800 producing cows to back a creamery which could be made a commercial success. I believed it would be possible to get a herd which would beat the Wisconsin record 100 pounds on the average. To do so would also increase the chance of the first generation of farmers being a success. If we could do this it would mean that the small farmer, milking ten cows, would be able to make \$50 more per cow than the Wisconsin dairyman—\$500 more altogether on his herd. This would double the average wage income of the ordinary farmer. It was worth attempting.

I chose Jerseys as my breed, and set to work. The experts said it couldn't be done, that the climate was against me. I recalled that when I was a boy, with no ice to be had anywhere in the range country, we had just as rich milk, just as good butter on my mother's table as I ever tasted. The climate was not against her, why should it be against me? I believed our native Texas grasses were better than the far-famed blue grass of Kentucky. Believing this myself, I set about to prove it to others.

I sought the best Jersey herds in the country, buying only American-bred cattle at first. Then it became my ambition to give my community the benefit of one of the best Jersey herds in the world. I secured a herd of select, island-bred Jerseys, 100 cows, costing an average of \$600 each. With that as a start, seven years ago, to get my island blood from, I continued breeding up my herd. In 1916 I exhibited at the National Dairy Show at Springfield, Massachusetts, and the Dairy Cattle Congress at Waterloo, Iowa, taking back home the breeders' diploma from both places. In 1917 I took back both the breeders' and exhibitors' diploma on my herd of 27 Jerseys, 22 of which had been bred on the ranch. That seems to me conclusive proof that our native Texas grasses are equal to Kentucky blue grass, or any other grass. If the country had not been as I had sized it up I could not possibly have got these results.

To-day Falfurrias butter is the standard for all Texas. We are marketing over \$1,000 worth of dairy products every day. We are drawing farmers from the North—Kansas, Missouri, and Illinois, in particular—and are enabling the first comers to get a firm foothold, and not to struggle through three generations before permanency is secured.

This, in outline, is the story of my business life, as FARM AND FIRESIDE requested it. Naturally, in the course of some forty years of active work among sheep, beef cattle, and dairy cattle, studying production problems first hand, encountering labor troubles, and finding the marketing end of stock-raising and general farming to be fully as important as the producing, I have come to hold firmly to certain economic principles. I am firmly convinced of the necessity of co-operation in the sale of farm products. But that, as Kipling says, is another story.

FRANK DRURY of Jacksonville, Illinois, is one of the biggest stockmen in America. Read his story next month about how he makes his hogs, cattle, and sheep bring him big profits.

"MAKING the Farmhand Stick to His Job" is the title of an article in the April issue that has a real message for you.

DREER'S 1919 GARDEN BOOK

DREER'S GARDEN BOOK 1919

Considered by thousands of gardeners, both amateur and professional, the most dependable guide published on the successful growing of

Vegetables and Flowers

It gives clear, concise cultural directions—much of it by experts who specialize on the particular Flower or Vegetable they tell you how to grow for garden, truck patch or farm.

224 big pages, 4 color plates and over a thousand photographic illustrations.

Mailed free to anyone mentioning this publication.

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Olds' Marquis Wheat

60 Bushels Per Acre in Illinois

PAUL R. LISHER, Farm Advisor for Will County, Illinois, who bought four car loads of seed of us, writes us September 3, 1918:

"I am very glad to report to you that from the Marquis Spring Wheat purchased from you last spring, some of our farmers have secured yields as high as 60 bushels per acre. Yields of 60 bushels per acre are relatively common and practically all the wheat from this seed has yielded 45 bushels per acre or better."

Olds' 1919 Catalog

tells all about this wonderful wheat, also other seeds—Clover, Alfalfa, Timothy, Oats, Corn, Etc. Samples free. Ask for those wanted. Garden Seeds, Flower Seeds, Bulbs, Tools. Write for Catalog.

L. L. OLDS SEED CO.
Drawer W-20 Madison, Wis.

STRAWBERRIES

Everybody should have strawberries in their War Garden. Easy to handle. Canning and preserving help food production. I help you start by offering

100 Plants—Standard Variety, Postpaid

Also Ever-bearing Strawberries at bargain prices. Victory orchard bargain, 17 fruit trees, assorted, 3 years old, \$3.95. Fruit Bargain—Strawberries, Raspberries, Blackberries, Grapes, 133 plants, \$3.25. Others in catalog.

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and Plants and Pkt. Giant Pansy Sent FREE. Best New Seeds sure to grow, at low prices. Gardeners ask for Wholesale List.

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No. 21 Blk., Rockford, Ill.

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Keeps Flies Out of the House

Flies will not stay in a room where it is grown. Very mysterious, but tests show such to be the case. Blooms (60 days from planting). Flowers summer and winter. To introduce our catalog, we will give the above with an order for

Japanese Rose Bushes Five for 10c

The Wonder of the World Roses on them in 8 weeks from planting seed. We Guarantee this. **BLOOM EVERY TEN WEEKS** Winter and Summer. Bush when 3 years old will have 5 or 6 hundred Roses. Grows in the house in winter or in the ground in summer. Roses

The Year Round. Pkt. of seeds with Guarantee, also above Shoo Fly Seeds. Both mailed with handsome Japanese Catalog for 10c.

Japan Seed Co., Box 134 So. Norwalk, Conn.

Humus—Crop Insurance

By W. L. Nelson

"I CAN make it rain whenever I want to," said a prosperous-looking farmer in reply to a seedy individual who at the close of a lecture on soils and crops had declared, "Let them talk all they please and give us all the advice they want to, but just give me plenty of rain and I'll get a crop."

What did these men mean, and what effect would their directly opposed courses of reasoning, if wide-spread, have upon the agricultural production of the nation at this time? To be sure, almost any of us can grow bumper crops when conditions are just right. To do so is no test of our ability. The real test comes when things go dead wrong.

Now, of all the adverse conditions there is nothing more disastrous than a drought. The continued "glassy sky" is not conducive either to crop yields or cheerfulness. Even the most optimistic of us find it exceedingly difficult to see the proverbial silver lining when there are no clouds. It is then that we wish for crop insurance, for the ability to make it rain.

Many costly experiments have been conducted in the hope of discovering some method of producing precipitation. Fake operators and fly-by-night folk have from time to time proclaimed their ability to produce rain on order, and as a result have reaped a rich harvest of coin from the over-credulous. Still, men wait in vain for showers, and in every country drought takes heavy toll—sometimes in every decade.

What, then, did Mr. Prosperous Farmer mean when he said that he could make it rain whenever he wanted to? Being a sensible man, he could not have meant that he had the ability to cause clouds to gather and rain to come pouring down. What he really referred to was the moisture in the soil, the moisture that he had carefully conserved against the season of need. The "dark cloud" that this man relies upon is just under the surface, not far above it. It is the soil—and good soil is the most satisfactory substitute for a shower.

What Mr. Prosperous Farmer meant was that through the use of legumes and green manures, through approved crop rotations, with a liberal supply of humus and with the right kind of cultivation, his crops continue to grow right along.

All of us have witnessed the withering work of a continued dry spell on thin land that had year after year been robbed of its fertility. Humus is crop insurance, but we must not, through bad management, allow the policy to lapse. If we insist upon working the ground too wet, or if, in cultivating our corn, we ridge it up like sweet-potato rows, and drought comes later in the summer, the crop will suffer.

All of us must exercise common sense and be ready to accept every truth that science teaches. We must learn how to conserve moisture—to make it rain so that crops will not grow thirsty.

What are Stock Hogs?

By Prof. A. M. Paterson

THE present plenitude of hog products, which is a national asset of importance, is due in no small measure to the recent development of a stock-hog trade, made possible by the immunization against cholera. Thousands of pigs were saved from the butcher, and are now returning to market carrying from 250 to 300 pounds of meat, fats, and by-products. In view of the scarcity and prohibitive prices of stock sheep and lambs, the pig is filling a sphere of usefulness that promises to grow.

Many markets have systematized the trade, regular dealers keeping a supply of immunized pigs of various weights on hand, ready to go to the country. For this service the feeder must make recompense, and the lusty condition of the stocker trade at the minor markets, to which testimony is given by higher prices for pigs than Chicago quotes, demonstrates that such middlemen have a legitimate place in the trade.

The stock-pig industry is susceptible to a vast and valuable expansion, meaning much to breeders in localities where maturing is impracticable, and to feeders and consumers. Extravagant prices were paid at intervals, but in a majority of cases feeders have been well rewarded. One Illinois man made so much money feeding soft corn to 700 head of hogs, bought in Wisconsin, that he is now fencing in his farm hog-tight, with the intention of remaining in the business.

A Vital Message to Every Corn Grower

All of the corn that you can raise this year will command a high price.

Every extra bushel you raise means extra profit.

Extra bushels will come from planting in each hill exactly the number of kernels required to match the soil's producing ability.

If a field is uniformly fertile enough to support three stalks to the hill, three kernels of tested corn should be planted in every hill. If it will support four stalks to the hill, you should plant four kernels in every hill. If the fertility varies, the number of kernels dropped should likewise vary—two kernels in poor spots, three in more fertile spots and four, or a greater number, in very rich spots.

Remember, you use a corn planter on faith. It isn't like plows and cultivators. Their work is visible—but the results of a corn planter's work are invisible—the corn is covered up and the mistakes do not show sometimes until too late to be remedied.

With accuracy as their goal, the John Deere factory which has made a specialty of building corn planters for over fifty years, started out to build a planter that would do perfect work its entire life.

This took years of painstaking care.

The John Deere No. 999 Corn Planter is the result.

Its accuracy is proved. Its drop can be changed instantly merely by pushing a lever.

★ ★

The factory specialists unanimously agree that it is built as perfectly as a corn planter can be built and rightly serve the purpose for which a corn planter is intended.

By manufacturers it is considered a "super planter"—by the thousands of satisfied farm users it has been rightly termed the "accurate planter."

Yet this planter is moderately priced. Due to the thorough and accurate planting it does—and this means during its entire life—it is a profitable investment at ten times the price.

Perhaps your present planter is a John Deere No. 999. If

that's the case, you need have no fear but that you are getting a maximum yield insofar as it is possible for a planter to contribute toward that yield.

If you haven't a John Deere No. 999, you may be under the impression that your old planter is doing accurate work when really it may be dropping 1, 2, 3, 4 or 5 kernels regardless of what you want it to drop—under-planting some hills and over-planting others—and you are losing a good profit every year. Such a planter is a "thief in the field"—the sooner you get rid of it the more money you will be ahead.

★ ★

You as a corn grower can not afford to postpone investigating thoroughly the John Deere No. 999 because it is a profit-maker from the first day it starts work in the field.

Every year this planter stays out of your field you are letting slip through your fingers profits that might just as easily come to you.

To give you a complete story of this planter we have prepared a book entitled "More and Better Corn", which also gives practical information on every feature of quantity and quality corn production. We will send you this valuable book free by return mail if you will drop us a card.

JOHN DEERE
MOLINE, ILLINOIS



This Valuable Book Sent Free

Don't neglect to send for this book. Do it now while this is fresh in your mind. The card asking for the book may be the most important and profitable one you'll write this year. In writing ask for package PS-111.

How I Love Nature!



Photograph by Press Illustrating Service, Inc.

MOST city people regard nature as the geraniums on the window sill and where the cat goes to after it is let out at night. In California they are more familiar with nature—so much so that Ted Shawn, the dancer, plays blind-man's buff outdoors without his rubbers on.

THE Atlantic Ocean is a body of water that has never made up its mind where to go, and objects to travelers who have. The best way to enjoy wet nature, like oceans and lakes and rivers, is to stand on the shore and think how nice and level it is where you are. Ocean beaches are particularly affected by summer girls, because of the tides: there are no footprints left in the morning to show your companion who you were with last night.



Photograph by Press Illustrating Service, Inc.

WILLIAM PESTER, one of nature's most prominent gentlemen, of near Palm Springs, California, lives unarmed right in the midst of nature. He says if you are square to Nature she will not double-cross you. So he lives on nuts and pomegranates, without a duplex collar or a pair of white flannel trousers to his name.



Photograph by Goldwyn Pictures Corp.

VIVIAN MARTIN is simply devoted to nature, and these are her two doves, Flora and Fauna. Nature fans have to have animals of some sort around. We recommend the doves. They do not crow in the pre-day light-saving morning, or have to be milked, and are universally becoming.



Photograph by Alice Boughton

QUITE a large part of nature consists of agriculture. Agriculture consists of potatoes, onions, sunflowers, etc., which the war raised from comparative obscurity to the height of fashion. By planting a sunflower seed carefully right side up, the above great shade tree may be obtained.



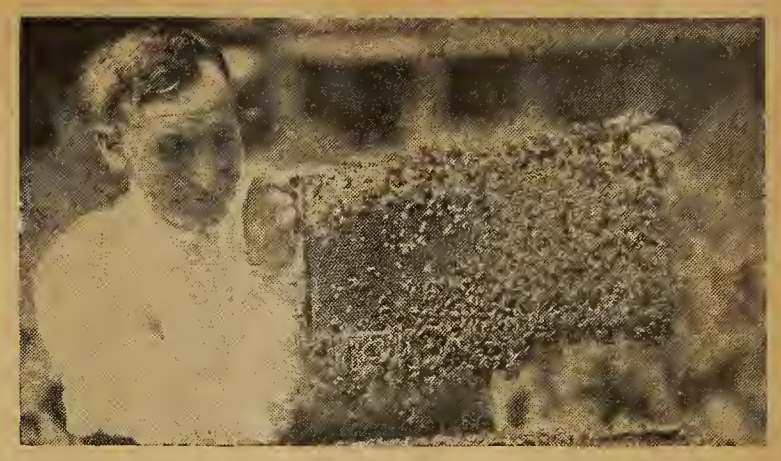
Photograph by American Film Co., Inc.

ABOVE is Mary Miles Minter surprised in the act of hoeing up some perfectly good corn. If you throw your derby over the windmill and go in for nature (as we hope you now will), you must make up your mind to a coat of tan, a sound digestion, an uncontrollable desire to go to bed at eight o'clock, and a chorus of friends saying, "What a perfectly sweet disposition that hateful old Jones has this summer!"

"Good Morning, Doc!"

WE MIGHT as well warn you right now that among all the doctors on this page there's not one M. D. They all have their degrees, but they're not that. No pill or potion could cure the things they cure. The precariously situated gentleman to our left—Dr. William Smith, D. D. B. (Dare-Devil Bill)—prescribes for ailing flags and flagpoles. He's a good doctor, even if he is up in the air most of the time. Long may he wave!

Photograph from Swisher



Photograph from G. I. Mead

THE only point of similarity between this doctor and regular medicine doctors is that he takes a chance on getting stung by bum patients. He is Dr. W. V. MacCarter, and in his time he has treated most of the very best bee families in the Connecticut Valley of Massachusetts. The bees up there are great for anyone troubled with hives.

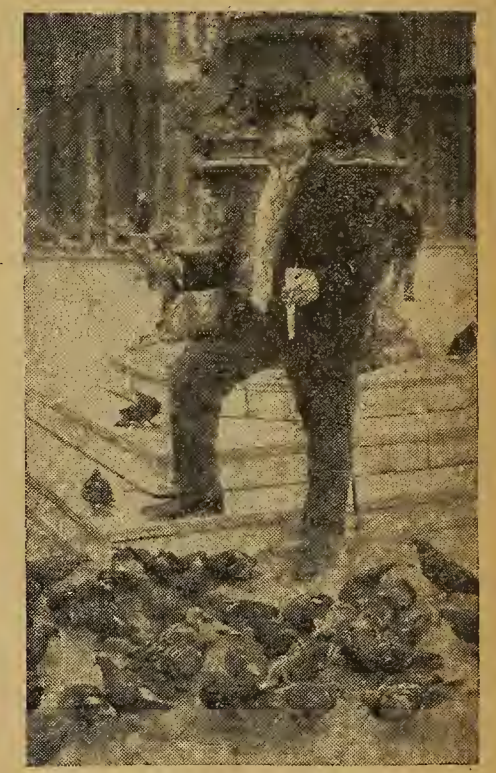


Photograph from B. H. Smith

WHICH would you rather be—an elephant with a toothache, or the doctor who fixed it? The patient in the picture is Lulu, a circus performer. When her molars got to bothering her they shackled Lulu's nose and called in Dr. Alexander Moxley. Lulu declined to "open," so he said: "All right, Lulu; we'll have to do the next best thing." And you see him at it.

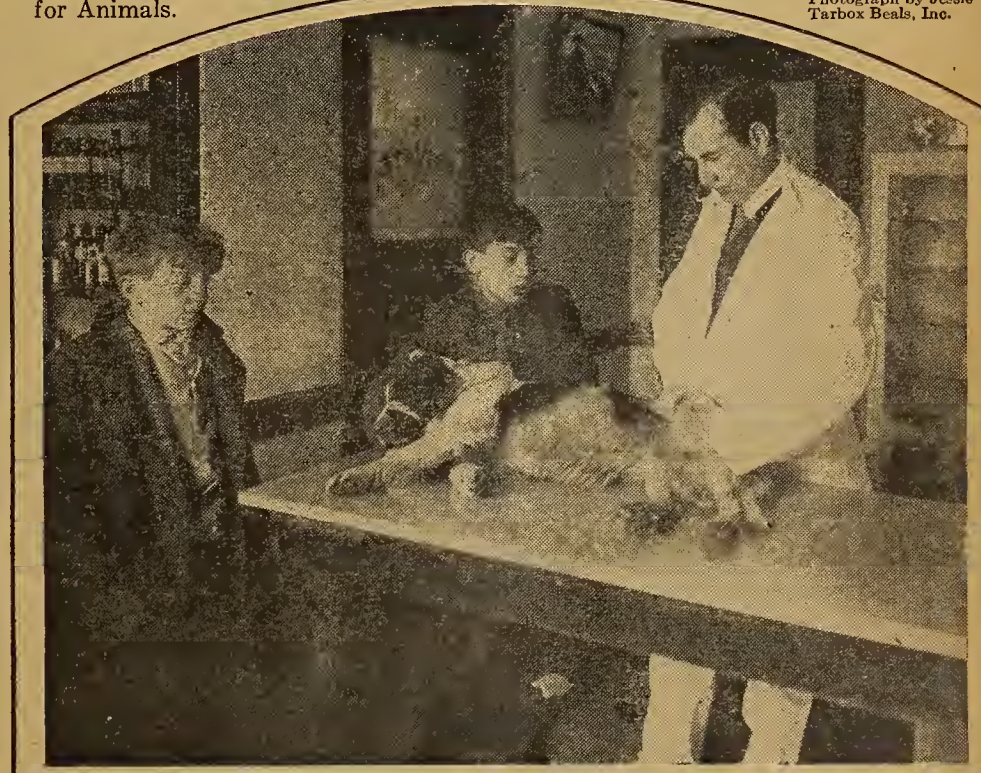


THERE seems to be something the matter with Bruno's left hind leg, and Tommy and Eddie have hurried him away to Dr. Bruce Blair, surgeon for the New York Women's League for Animals.



AND just above we have Dr. Sam Singer of New York, surgeon general to crippled postage stamps. Any collector in the country having a valuable stamp which is sick or ailing—suffering from a tear, a perforation, or a discoloration, for instance—sends at once for Doctor Sam. And Sam does the rest. He has saved thousands of rare stamps; and the picture shows him in Venice, enjoying a well-earned holiday with the pigeons.

Photograph by Jessie Tarbox Beals, Inc.



CHURCHES sometimes get sick; and when they do there's a doctor for them: James L. Schofield—Sunny Jim. Mr. Schofield takes the pulse of the sick church and prescribes for it. Perhaps there are not enough oysters in the monthly oyster-stew suppers; perhaps the young people are away at the movies, holding hands in the love scenes. Whatever the trouble, Doctor Jim discovers it. He can cure practically any church trouble except a preacher who preaches too long. There is no cure for that except decapitation.



ROOFINGS



Five in One

Especially suited to the farmer's needs—that is what can be truthfully said of S-P-C Roofings. They are designed particularly to meet the varied requirements of the farm.

Under the one name are sold five different brands of ready-roofing. There is not a building on your farm for which one of these brands will not prove suitable. If you are to roof a barn you will choose one brand—if an inexpensive corn crib, you will take another. This choice is always open to you when you buy from a dealer who carries

S-P-C Roofings

There is no difficulty about price, quality, or finish. You select the quality and finish which best fits your needs at the price you want to pay.

S-P-C Roofings are made by The Standard Paint Company, the pioneer manufacturer of ready-roofing. The experience of over a quarter of a century is back of every roll. That is why each of the five S-P-C brands is the best to be had at the price. These brands are Imp, Cronolite, Zylx, Starex, and Slatex (slate surfaced individual or strip shingles, and roll roofing). Each is made in a distinct finish.

When you are ready to buy roofing, be sure to consult a dealer who carries S-P-C Roofings. He offers you the widest range for choice and the best service. Remember to look for the circle trademark. It appears on every roll.



THE STANDARD PAINT COMPANY

Chicago New York Boston
Makers of

RU-BER-OLD ROOFING

What About the Loganberry?

By C. J. Menze

THE loganberry has taken on a new importance in the Pacific States of late, also in certain sections of the Rocky Mountain States where the winters are not too severe. Since such large areas of the country became "dry," the bottling of unfermented loganberry juice is becoming a most profitable industry which seems destined to rank with the grape-juice trade.

This berry, a cross between the wild blackberry of California and a red raspberry, also has a large field of usefulness as a fresh shipping fruit and for evaporation. It must have winter protection in sections where the temperature approaches zero; and even when protected it fails to



Here is a small section of Mr. Radcliffe's loganberry patch. Notice how well trimmed and supported he keeps the vines, and also the finely pulverized soil. He says the patch is a money-maker.

bear as profusely as in its Pacific Northwest home. However, in many parts of the arid Southern States the loganberry will become a popular favorite, and farther north in a limited way. It is easy to protect by burying the canes, since each year's new growth is allowed to lie on the ground until raised to their supports in the spring.

Let me give you a word picture of this wonderful berry as grown by John T. Radcliffe, Whatcom County, Washington. The straight rows, the systematically trained berry vines, and the neat appearance of his berry field in general attracts the attention of persons whether they are interested in berry-growing or not.

Although his field is small—only one acre—his methods of caring for the plants are practical, and can be applied to a large area equally as well.

"Do you find the growing of loganberries profitable?" I asked him.

"Yes, if you take care of the field properly. I have a friend who has four acres of berries but does not market as many berries from four acres as I do from my one acre. In all pursuits there are certain methods that will, if followed, produce good results. This is particularly true of the loganberry. These methods must be worked out by each grower according to his climate, locality, and soil."

Mr. Radcliffe went on to say that his berry field had, on its second year of fruiting, produced 310 crates of marketable berries. He sells his entire crop to the fruit cannery at four to six cents a pound. The crates average 25 pounds net each. He therefore receives from \$1 to \$1.50 a crate. As the berries are larger than blackberries and raspberries, and consequently the pickers can pick more berries, he therefore pays less for picking.

The plants are planted in rows eight feet apart and sixteen feet apart in the rows. Mr. Radcliffe trains one half of the vines from each plant one way and the other half the other direction along the row. The field is thoroughly cultivated during the growing season. The bearing vines are trained on trellises to keep the berries clean and facilitate picking. The method followed by Mr. Radcliffe is to drive a post every twenty feet along the rows. On each post, about four feet above the ground, crosspieces about two feet in length are spiked on. Two wires are stretched along each row and stapled to the crosspieces. Between the posts and on the wires, about four feet apart, other crosspieces are laid. The bearing vines are trained on these crosspieces. The vines that are growing and will bear the following year are trained

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Send \$1 today or write for our 1919 Catalog fully describing the "Victory" Garden Collection, also our complete line of Vegetables and Flowers. Do it now—before your favorite kinds are exhausted.

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Prices Below All Others

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Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.

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All sold subject to State or Government Test under an absolute MONEY-BACK GUARANTEE. We are specialists in grass and field seeds. Located so as to save you money and give quick service. Send today for our big profit-sharing, money-saving Seed Guide which explains all, free. Buy now and save money. Write

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Best June and Fall-Bearing Strawberries at Reasonable Prices. Also Raspberry, Blackberry, Currant and Grape Plants in Assortment. Catalog FREE.

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Genuine Grimm is most profitable because of its hardiness, large yields and high feeding value. Less seed required to get a stand. Booklet, testimonials and seed sample free.

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The Big Money Making Crop. \$1200.00 from one acre is what our customer Mrs. Dorothy Engen made last season. To help you do as well and to introduce you to our Northern Grown Live "Sure Crop" Seeds, we will mail you 250 seeds of this most perfect White Onion and our BIG 1919 GARDEN AND FARM GUIDE. Send Postal Today

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Best for windbreaks, hedges and lawn planting. Protect buildings, crops, stock, gardens and orchards. Hill's Evergreens are Nursery grown and hardy everywhere. Hill's Evergreen book, illustrated in colors, sent free. Write today. World's largest growers. Est. 1855.

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CLOVER AND TIMOTHY BARGAIN

Red Clover and Timothy mixed—the standard grasses cannot be surpassed for hay or pasture. Contains large per cent clover, just right to sow. Thoroughly cleaned and acid on approval, subject to government test. Ask for this mixed seed if you want our greatest bargain. Have Pure Clover, Sweet Clover, Timothy and all Field and Grass Seeds. Don't buy until you write for free samples and 118-page catalog.

A. A. BERRY SEED CO., Box 642, CLARINDA, IOWA

30 YEARS GROWING BERRY PLANTS

Baldwin's Big Berry Plant Farms produce healthy, northern grown, standard varieties and everbearing Strawberries, Raspberries, Blackberries, Currants and Grape Plants. Grown on new ground. Read about our money back guarantee in Fruit Book. All plants true to name. Properly packed to reach you in good growing condition. Write for our Fruit Plant Book today.

O. A. D. BALDWIN, R. R. 23, Bridgman, Mich.

along the ground parallel with the bearing vines.

Mr. Radcliffe emphasized the need of proper care of the vines that are on the ground to prevent them from being injured, and sometimes killed, by severe frosts. "In the fall of the year," he said, "I gather these vines together and am particular that they lay close to the ground. I then drive small stakes in the ground over the vines which keep them close to the ground, and also prevent the wind from blowing them around."

"The vines that have borne a crop of berries are removed during the winter. In the spring, after all danger of severe frosts has passed, the vines that are on the ground are put in place on the trellises, cut back and thinned out if necessary, and my field is ready to be cultivated."

The vines grow to a length of from 10 to 15 feet. The berries do not have the cup-like hollow like the raspberry, but are the shape of the blackberry, only larger—about one to two inches in length and three fourths of an inch in diameter—and are a rich red color when ripe.

The plants are propagated either by layering or division of the large plant. The first year after planting in the field a small crop of berries may be picked, but a full crop is not expected until the second or third year. A small cultivated crop can be grown to advantage between the rows the first year if land is at a premium.

Loganberries prefer a deep, moist, but not wet, soil. If water stands on the ground during the winter, or the soil is sour, they will not grow and produce a maximum crop. Planting after a cultivated crop makes an ideal field.

A Hurry-up Hotbed

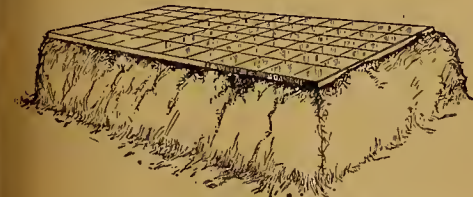
By H. F. Grinstead

THE experienced commercial gardener has his permanent hotbeds and forcing frames, with concrete- or brick-walled pit, suited exactly to his needs.

But I have found that "hurry-up" hotbeds often answer my purpose admirably, and they can be made almost "at the drop of a hat" and be located where most convenient.

For such temporary hotbeds I haul a big load of horse manure to a protected place in the garden or truck patch, and level and compact the heap into an oblong pile two feet larger in each direction than the sash frames I intend to use. The pile of manure should be at least 18 inches thick after compacting. Next, I place the frame made of 10- or 12-inch boards, and constructed to fit the sash snug and tight, on the pile of manure and set it to incline a few inches toward the south. When in place the frame is banked on all sides carefully with manure. It is then ready for spreading a layer of four or five inches of rich, sandy soil on the inside of the frame.

This gives us a serviceable hotbed ready for putting on the sash, and not over an hour is needed for the entire operation. When needed no longer, this hotbed can be dismantled even more quickly than it was made.



This temporary hotbed can be made in forty minutes

Plant Sprouts, Eat Potatoes

By Thomas J. Newbury

DURING the potato famine two years ago a good deal was heard about raising potatoes from peelings, eye sets, and even divided eye pieces. Our plan of conserving potato seed is to plant the sprouts broken from the table potatoes.

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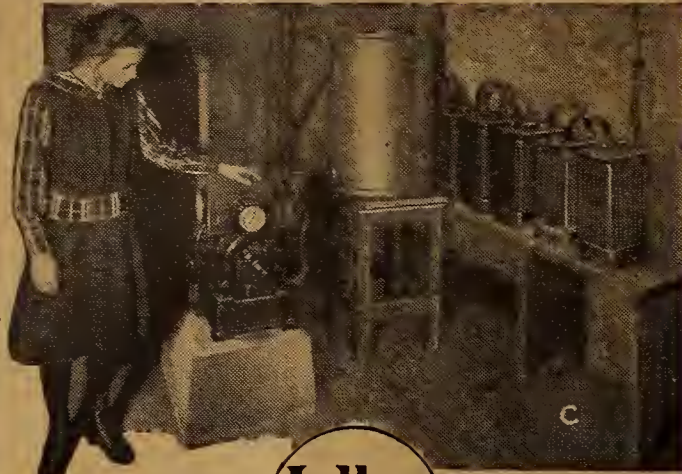
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**Saves \$7 in Money,
18 Hours in Labor**

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Key to the Pictures

A—Mrs. Jacob Renz, Saline, Mich., in her Lalley electric-light farm kitchen.

B—Farmhouse of E. F. Swinney, bank president, at Independence, Mo., equipped with Lalley Light and Power.

C—Lalley-Light installation in the basement of John Boettner's home, Saline, Mich. A child can run the plant.

figures that it saves him \$7 in cash per week, and 18 hours of labor.

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Fences and Neighbors

By A. J. Andrews

IT IS an old saying that good fences make good neighbors, and I think it is true. I have read many articles on building fences and have given it much study, and my neighbors say I build a good fence, so I will tell how I go about it.

The first thing I do is to tear out the old fence and thoroughly clean the fence row. I cut all fence posts 8 feet long except end and angle posts, and those I cut 10 feet. I grub young locusts for my end and angle posts. The size I like best is about 5 inches in diameter at the top. I leave a generous stump on the bottom for an anchor.

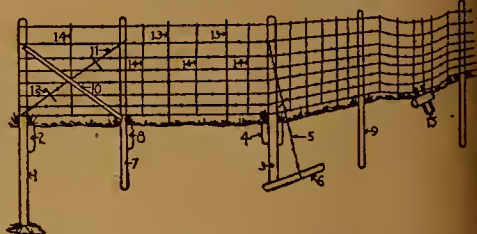
Next I haul my posts and unload one every 10 steps, which is about 30 feet apart, and am now ready to commence the real work of fence building.

The first posts to be set are the end ones (1), and they go in the ground 5 feet. In filling around the post I tamp the dirt thoroughly and when near the top I set a large stone (2) edgewise, just so it comes flush with the surface of the ground and so that the wires pull the post square against the stone. I am particular to leave no space unfilled around stone or post. I prefer to set posts when the ground is very wet, but I do not stretch the wire until after the ground is dry.

If my fence line is to have bends in it, I next set my angle post (3) in the same manner as end post, and am very particular to get the stone (4) exactly where the pressure comes.

On angle posts I place a guy line (5) of No. 9 wire to a "dead man" (6) planted in ground 2½ or 3 feet. The guy line should be exactly opposite the stone. I fill over the "dead man" with stone and dirt.

I next set my first line post (7) 12 feet from end post and 3 feet in the ground. A



stone (8) is placed so the post will pull against it.

I now set all line posts (9) 3 feet in the ground. They are about 30 feet apart.

I now make a notch in end post one foot from the top and in the first line post 6 inches from the bottom, and put in a wood brace (10). This brace may be 4x4x14, but a straight, stout round pole gives just as good results.

Now I run a No. 9 wire (11) around the bottom of end post and top of next post, and splice as tight as I can draw it. I notch the posts slightly, so that the wires will stay in place.

If your neighbor will let you, you can guy the end post the same as an angle post, or if he has a tight wire fence let it act as a guy. I do no work on the fence from now till the ground is dry enough so end posts will not give.

Just before I commence stretching line wires I tighten all guy lines and wire braces by twisting with a piece of board (12).

I fasten my barbed wire to top of end post with one staple and by bringing it around the post and twisting it. Then I unwind the wire until I come to the other end, and fasten stretchers around end post, place grip on wire, and draw moderately tight. I prefer a double-block stretcher, as it will easily stretch 80 rods at one pull. I now staple wire to the line posts where I have marked my spaces for them, as I always face and mark my posts at the time I set them.

I now staple two wood stays (13) between each post. This gives a good support to the fence every 10 feet. To keep stock from spreading wires I use a No. 12 wire, and twist it around each line wire in center of spaces (14) between posts and stays.

If there is a low place in the line of my fence I place two wire stays, and over the bottom line wire I place two short pieces of wood (15), and on these I place sufficient stone to bring the fence to the required height from the ground. This acts as a tension for the fence. If it is necessary to cross a small stream that does not require a floodgate, I carry the line wire above high water and fill underneath with old rails or a piece of woven wire fencing.

I use the standard two-point hog barbed wire, and place the bottom wire five inches from the ground and the spaces are as follows: 5, 5, 6, 7, 8, 9, and 10 inches. This gives me a 55-inch fence.

Mrs. Murphy and the Princess

[CONTINUED FROM PAGE 27]

enthusiastic boy had become a purposeful man. His mother saw the change and grieved silently. Each made every effort to lighten the other's burden.

Mrs. Murphy's enthusiastic devotion to society suffered a setback. She was not the sort to mope. Her early struggles and her desire for Mountford's advancement obviated any such attitude toward life.

Mountford passed his examination successfully and awaited permission to don his captain's uniform.

Two weeks later Bates had just completed her mistress' toilet when Mrs. Murphy's mail was brought in. Two letters postmarked Washington caused a clutch at her heart. She opened the first and read:

The Princess Athena of Tenravia desires to express her heartfelt thanks to Mrs. Murphy for her kindness to Olga Bernoff, and begs that she accept, as a slight token of appreciation, the ring which she will receive. The Princess Athena wishes to assure Mrs. Murphy that her co-operation has been of the greatest service to her in assisting to preserve her incognito, thus permitting her to attend to important matters of state, unhampered by social restrictions.

Mrs. Murphy gasped. She did not know what to make of it. Perhaps the second letter would explain matters. She opened it. It was written on Willard Hotel stationery:

MY DEAR, DEAR FRIEND: I hope that when you read this you will still allow me to call you friend. I am not the Princess Athena; I am just what you thought I pretended to be—Olga Bernoff, a servant in the princess' household. My mistress' mission to this country demanded secrecy. When she discovered that the news of her arrival had leaked out she sent the wireless message which you saw. When you, dear friend, acquainted me with your knowledge of its contents, my loyalty to my king and my mistress demanded my silence.

I can only assure you that I grieve over the deception that was practiced. Will you try to think of me as kindly as possible?

With a heart overflowing with love for you and your family, I say farewell. God be with you and yours. OLGA BERNOFF.

P. S. The girl who was generally known in your city as Princess Athena is Tavia Androff, a fellow servant. The two peasant girls on the steamer were my royal mistress and her maid of honor. OLGA.

"Well, of all things! Bless my soul!" Mrs. Murphy's emotions were mixed. She was made helpless by their variety.

A KNOCK at the door was followed by the butler, bearing a card inscribed, "Captain Mountford Murphy." The boy had sought to please his mother by making a dramatic entrance in his new uniform. He looked every inch a soldier. He stood at attention and saluted her.

"My dear, dear baby! I am proud of you!" and she sobbed in exultation on his shoulder.

"Mother, I have a ten days' furlough before reporting for service, and I'm going to spend every bit of it with you."

"My blessed boy! Your old mother doesn't deserve you!"

"You mean I don't deserve the best mother a fellow ever had!"

She remembered the letter. Silently she handed it to him.

As he read it his hand shook. When he had finished he looked at her excitedly. There was a wild light in his eyes. He was incapable of speech.

"Mountford, darlin', if you've not been to your room you'd better go. Belike she sent you a letter too. Go and see."

He went precipitately. She waited an hour. When he returned he was crazily waving a letter, which he handed to his mother.

"Mother, Mother, I've spoken to her!" In fearsome agitation she looked at him. Had the shock unsettled his mind?

"I've long-distanced her at her hotel in Washington. I'm leaving in an hour to go to her." The dearest mother in the world was forgotten. He dashed out of the room. She read the letter:

MOUNTFORD DEAR: My letter to your mother will explain what I wished you to know. You will understand now why I cannot marry you. I am only a servant. Try to forgive me. May God show you your duty as I see mine. With everlasting love, OLGA.

When he returned to bid his mother good-by she was dressed presumably to go to the station with him.

"Say good-by to Father and tell him I'll be back in ten days."

"Indeed, I'll do nothin' of the kind! I'm goin' along wid yer."



"An Ounce of Prevention"

What is more exasperating than to find a machine in need of doctoring and repairing on the very day when you need it most. Now is the time to guard against having that happen to you this year. Comparatively little time spent now in going over your machines, making what repairs you can, and providing for the needs of the coming season, is the ounce of prevention that may save you days of delay later and enable you to handle your crops on time.

It is our intention to make this work of overhauling and repairing as easy as possible this winter. Dealers have all agreed to make the week of March 3-8 a Repair and Inspection Week. If you will give the dealer your list of needed IHC repair parts the first week in March or sooner, he can have them on hand for you so that you need not waste one unnecessary minute of your working time this year on account of repair parts.

The dealer is anxious to give you good service, and he can do it with a little help from you. Will you take this least busy time to look over your machines, make up a list of repair parts you need or are likely to need, and hand it to the dealer before or during Repair and Inspection Week, March 3-8. Thank you!

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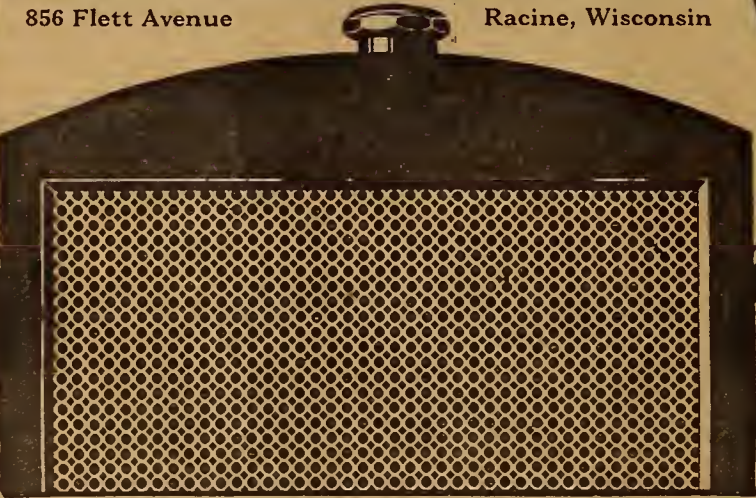
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Better Plowing Means More Dollars

By H. H. Haynes

IF THERE ever was a time in the history of the world when the farmer should give close attention to plowing, it is from now on. Strange as it may seem, this most important of all farming operations, this thing from which all cultivation starts, is given the least intelligent thought. The success or failure in the raising of a crop depends more upon the plowing than any other operation connected with crop-growing.

We have not learned, as a nation of farmers, that with the proper use of the plow the weed and insect nuisance of the United States and Canada, a loss which man attempts to estimate at \$700,000,000 annually, can be eradicated. I say as a nation. There are many individuals who realize the importance of good plowing, and the result they get is proof enough; but the vast majority are still at fault. Think what it would mean in 1919, not only to the farmers of the United States but to every industry, if that seven hundred million dollars could be turned into commercial channels rather than be fed to weeds and insects, both of which the proper use of the plow could exterminate, and which have no earthly use except to keep the farmer on his mettle.

A few years ago Mr. F. Bowman of Decatur County, Iowa, won first prize in a corn-growing contest, with 109 bushels and 40 pounds of corn to a measured acre. Mr. Bowman says his field was a blue-grass sod, fall-plowed seven inches deep. His neighbors did not grow any such crop of corn, and the fertility of the land was all the same. It was discovered that wireworms and grubs in a number of instances made replanting necessary. Assuming that the average crop was 60 bushels an acre—and this is a high average—the difference between 60 and 109 bushels, or 49 bushels, represents the additional wealth of Mr. Bowman for having fall-plowed that blue-grass sod.

The secret of Mr. Bowman's success was the freezing of the grubs and wireworms, and also the opportunity to get on his field earlier in the year with his disk harrow, and make the kind of a seed bed that nature demands for the corn crop. If fall plowing is impossible, spring plowing should start at the earliest possible moment. It is not to be supposed that a farmer can control the weather, but he can place himself in the position to remedy the evil effects of bad weather conditions. He can do this with a plow if he understands how and when.

No Rules You Can Follow

On account of the different types of soil and different weather conditions in different sections of the United States, it is impossible to give a certain set of rules or formulas by which a farmer can plow his ground. We farmers cannot plow, harrow, and cultivate our ground in the same manner any two successive years with the expectation of being able to grow a maximum crop. Nature never gives us the same soil and weather conditions in any two years, and we never have our soil in the same state of fertility and physical condition any two successive years. We have a new problem every year. The working-out of that problem successfully is determined by our knowledge of the crops we wish to raise, what is necessary for their growth, and how to put our ground in such condition that these things can take place.

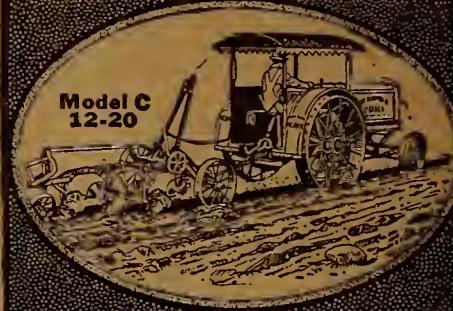
The unfortunate part is that the principles back of plowing are not generally understood, and yet they are vitally necessary for the increased crop production to which we are all striving. The plow transforms latent power into kinetic energy. This commonplace instrument decides the destinies of nations; but, in spite of this, its proper use has been given the least thought and attention of any farming operation.

To attempt to tell every farmer what kind of plowing is best adapted to his locality would take volumes. Farmers in Indiana, in California, in Texas, and in Virginia all have different soil conditions to contend with, and a rule for one would not apply to another.

The best plan is this: Write to the experiment station in your own home State. Tell them exactly what part of the State you live in, and the kind of soil you have on your farm. Most States have made a very close analysis of the soil within their borders, and will be able to direct your plowing operations correctly.

Heider Tractors

Rock Island Tractor Tools

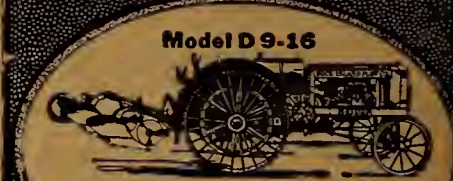


Model C 12-20

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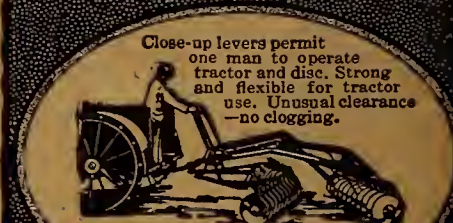
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Rock Island No. 38 One-Man Tractor Disc Harrow

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FARM AND FIRESIDE
SPRINGFIELD, OHIO

A Handy Tool for Farmers

By Earl Rogers

ONE of the tools that I always thought of as a mechanic's tool is a hack saw. Now I find that such a saw is about the handiest tool I have around the farm.

They cost from 50 cents to \$1 for a good frame and some blades, and save that in time and bother in a little while. I like the adjustable frame, as it will take most any length of blade. It is also handy to buy longer blades and then, if they break, bore a hole through the end and use the short piece. For my own work, however, I like to buy the short blades—eight inches or less—as they do not break so quickly. The breakage is more of the expense than the wearing out.

There is a blade on the market which does not break easily. It is called flexible. It will bend a good deal before breaking, and will be serviceable until worn out.

I find that the number of points or teeth to the inch makes a difference in the cutting. Until lately I have had 14 points to the inch. Now I get 24 points, and like it better for every kind of work.

Any bolt that turns in the wood that it holds together, or a piece of iron, can be quickly cut off with a hack saw. I have cut small pipes off in a hurry, or cut a hole in the side of a pipe with a hack saw. If you want to put a cut-out on your machine, this saw will save the price of the garage man's work, and you can do the job in a hurry by sawing a V-shaped hole in the side of the exhaust pipe.

Brush for Harness Oil

By Earl Rogers

IT STANDS every farmer in good stead to use all the care he can with his harness. Not only is leather exceedingly high in price, but it is mighty hard to get.

The usual job of oiling a harness is one that is dreaded. I have read so many times about how to take the harness all apart and unbuckle every possible buckle, then wash with lukewarm water and soap and keep it in a warm place, and with a cloth saturated with the oil go carefully over every piece. All this is right, but how many farmers who are using a harness practically every day in the year have the time or the notion to do that sort of job?

My plan is to take a harness at a time and clean off the mud and sweat the best you can, take the straps out of their keepers and go at it with a good oil with blackening in it.

Instead of the cloth soaked with oil I take a two-inch brush and a saucer or small pan and apply it that way. It is quicker, gets into the cracks much better, and keeps your hands clean while you work. Then, if there is time, take another harness and do the same. Hang the collar and bridle separate, and the rest of the harness over a rope that is adjusted to suit your height. After a few hours go over the job and wipe off the excess oil and apply more where it shows need.

If you have time and want the harness to look better all around, get a small can of enamel and go over the metal parts. It dries in a few hours, and then the entire harness looks fresh and new.

Some farmers have a little can of oil with a cloth in it which sets back of the horses. When they have time they take a clothful of oil and run over the tugs or lines, and after a few nights they have the harness all oiled.

Putting a Polish on the Plow

By E. V. Laughlin

MANY plows, even those that have been well covered with oil or axle grease, fail to scour readily when first taken into the field. The following method is being used by many farmers to overcome the inconvenience attending the use of a plow that fails to clean off quickly: The plow is taken to the near-by branch or creek and drawn a few times through the sand or gravel beds that invariably are found along water courses. It usually takes but a few turns to cut off the rust or hardened grease. Under no circumstances does the sand stick to the plow, no matter how rusty it may be; and if the gravel does not contain large stones the plow will not be dulled.

Twice The Work-Half The Expense



MOLINE UNIVERSAL TRACTOR

"One man and a Moline-Universal Tractor will do about the same work (taking a season through) as two men with four horse teams."—Crumbaugh Bros., Vandalia, Illinois.

Statements such as this from Moline-Universal owners—and we have many of them—support our claim that the Moline-Universal enables one man to do twice as much work at about half the expense as is possible with horses.

With a Moline-Universal you can plow 9 acres a day, double disc 27 acres, drill 35 acres, cultivate 15 to 20 acres, mow 25 to 35 acres, and harvest 30 to 35 acres. Figure out for yourself how long this would take you with horses. Then keep in mind that in case of necessity you can work night as well as day, because the Moline-Universal has complete electrical equipment, including electric lights and self-starter.

As for expense it runs about half what the same work with horses would cost.

Charles J. Deck of McArthur, N. D., says: "I plowed 60 acres—fuel amounted to \$32.94. It would

have cost me \$82.40 to plow this with 6 horses, not figuring feed for Sunday, or rainy days. I did not have to get up at 5 o'clock every morning either." Mr. Beck did not consider the saving of his own time.

"If I hadn't had the Moline-Universal I would have kept 4 more horses, which are a bigger expense than the tractor," says J. E. Carey of Wilmington, Ohio.

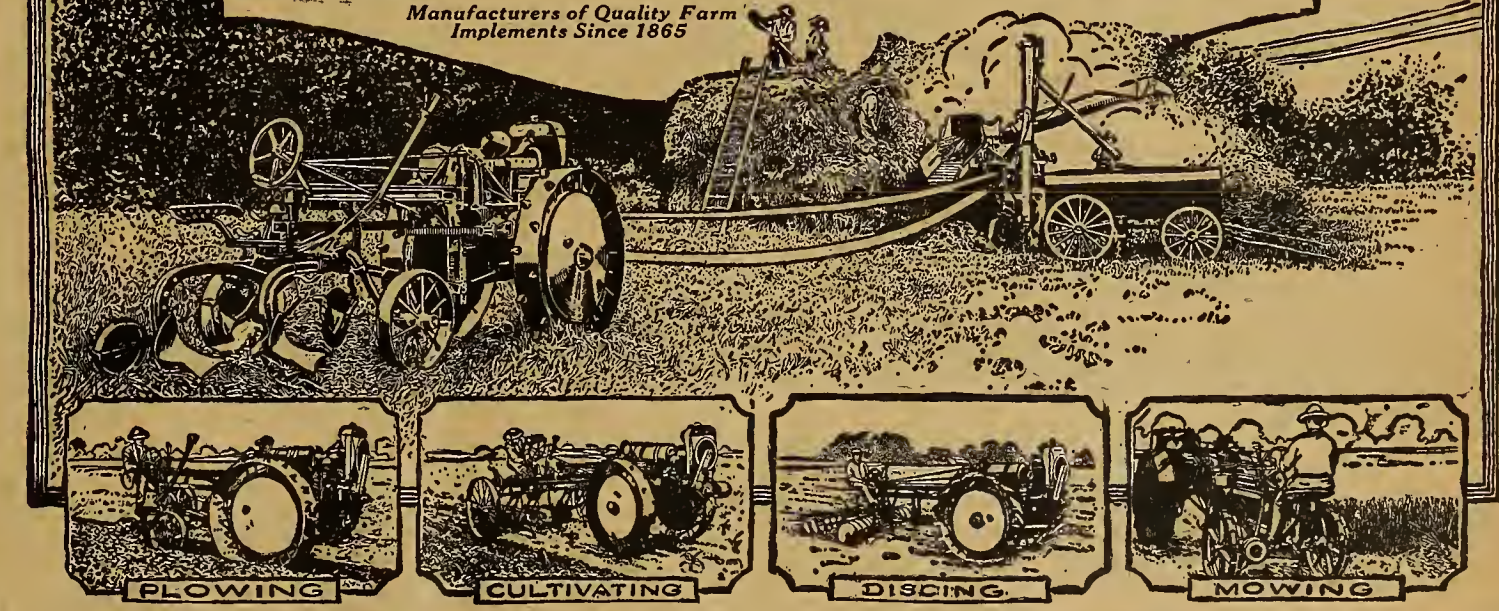
Many other statements similar to this prove that the cost of operating a Moline-Universal Tractor is no greater than maintaining three or four horses, while it will do twice as much work. Then there is another big advantage—belt work. The Moline-Universal has enough power for all ordinary belt power requirements.

"I purchased a 20x36 separator and then threshed my grain, pulling it with the Moline Model D. The tractor handled this separator very easily and did fine work. After I had threshed my own grain, I threshed for four of my neighbors, about 350 acres in all."—G. C. Appenzeller, Bouton, Ia.

Considered from every angle the Moline-Universal is the best tractor for you. It does all farm work, including cultivating. One man operates both tractor and implement from the seat of the implement. It will make you money. See your Moline dealer now or write us for full information. Address Dept. 60.

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Is It Safe to Go In for Live Stock?

[CONTINUED FROM PAGE 14]

of making fat. We have plenty of cattle now, but the pinch for beef is going to hit the public in the next year or two.

"We'll be hungry for beef because of the drought conditions in the West and Southwest, which caused the liquidation of thousands of young heifers and steers. This free liquidation means a shortage for 1919, with the acute point in 1920. Breeding stock will continue to command nice prices, if the breeders don't get cold feet. I think prices will remain good."

"Bill" Pew quit telling farm boys about the "straight lines, fine head, and deep bodies" of cattle at Iowa State College, and went to farming for himself at Ravenna, Ohio, because "there was more money in it." Bill is a wise man in the live-stock world, and during the last year has been all over the country judging live stock.

"People with whom I have talked," he said, "tell me there are not as many cattle on feed over the country as there were a year ago. The prospects are good for beef; in fact, for meats of all kinds. We've got to raise hogs for the world, and it is quite a job. Prices should be remunerative for a few years to come."

Everett C. Brown of Chicago is chairman of the Stabilization and Control Committee of the Food Administration. He is on the inside of government affairs pertaining to food, and knows conditions, being a hog man himself. He sees very good prices for the next year—in fact, he says we can't supply enough pork.

W. A. Cochel, formerly with the Kansas Agricultural College, and now connected with the Shorthorn Association, after spending about six months traveling over the country visiting farmers, had a few remarks to make on the future of the industry.

"Farmers are paying more attention to breeding than ever before," he declared, "due to the fact that feeds are high, and it costs like the dickens to feed cattle. They are buying breeding stock of the early maturing type, and are using good bulls to breed up their grade herds. Never was there such a big demand for good females."

In the sheep camp the breeders seem to be between two fires. They are enjoying prosperity now, and making the best of it, because they see a doubtful future. They never pass up an opportunity to take a wallop at the tariff; and, in fact, the tariff is the big thing which is worrying them.

When anyone mentions sheep they think of the King Brothers at Cheyenne, Wyoming, and I talked with F. S. King about the business. He says the outlook is great, depending on what is done with the tariff.

"I expect a slight slump in wool prices," Mr. King told me, "but the price will go higher, provided the Government does not let Australian wool into this country free of duty. Sheepmen are now laying their plans to see if they cannot have the Australian product taxed so that it will meet our product on the same basis."

"Mutton will be high for three years and there will be big sales of breeding stock from now on. Sheepmen are weeding out the poorest of their breeding stock, and filling in with producers. Efficiency has been the cry of the country, and it is spreading to the sheep business. We didn't get a square deal on the wool this year, either, for our prices averaged from 5 to 10 cents a pound under a year ago."

J. D. Larkin of Buffalo, New York, sees a wonderful demand for sheep and wool. He thinks the price of both products will be good, especially Southdowns, which he breeds. Pre-war prices for sheep and wool won't be reached for several years to come, is the viewpoint of Ed Charlton of Chazy, New York. He said there is a world shortage of sheep, and when the depression sets in this will become known, and prices will advance.

J. C. Hanmer of Ames, Iowa, who judged part of the sheep, said he can't see any more profit in cattle and hogs than he can in sheep.

"I can't see any reason why values should decline," was his statement. "There is no wool in the country to speak of, and unless the Australian stuff comes in without tariff we will have prosperous times for a few years. Clothing is higher than the sun, and I have been unable to supply enough lambs to fill the demand made on me, even at prices ranging from \$75 to \$135 a head."

This line-up is not at all discouraging. On the whole, I should say it is safe to go in for live stock.

Maybe You Can Sell It

By F. R. Cozzens

PERHAPS you have something lying around the farm, long gone into the discard, which would be valuable to your neighbor. This was brought forcibly to my notice not long ago by an unusual incident.

George Brown was needing money—not for the first time, it is true; but the only time when the snug little bank account could not meet requirements. Sicknes had cut into it considerably the previous months, and the market prices on live stock were so low that he had not believed it would pay him to open up the corncrib and start feeding operations. Consequently he was broke. The need at the time was only \$35, but it had to be raised within a week, and it was an unfailing rule in the Brown household that accounts were not allowed to “run over.”

Brown sat down one evening to think it over. His wife usually shared such difficulties with him, but this night she was very busy. A rummage sale was to be held soon for the Red Cross, and she was scouring the house from cellar to attic in search of stray articles. Consequently the man of the house was doing his thinking alone.

Suddenly an idea struck him. He would have a rummage sale too, only on a different plan. Next morning he started out, first going to the woodlot, then to the barn and workshop, gathering up things here and there.

At the end of the week Brown itemized the following articles which he had picked up and sold:

One discarded mower.....	\$10.00
Straps and rings from worn-out harness.....	5.00
50 locust posts at 25c.....	12.50
Woven wire.....	2.00
50 lbs. scrap rubber at 9c.....	4.50
Chains and hooks.....	1.50
Parts from worn-out binder.....	8.00
Total.....	\$43.50

Everything except the posts had been consigned to the junk pile. The mower was needed by Smith to repair one that he had. The wire just enclosed Neighbor Jones's hog-lot, and so on down the list.

Brown not only relieved his own difficulty, but those of his neighbors as well. Perhaps you wouldn't be able to find as much as he did, but it might be a good plan to take a look around the next rainy day. It may surprise you how many things you can dig up.

What Scale Records Tell

By J. L. Justice

SOME farmers were recently discussing the beef-cattle question, one man saying the industry would decline because of the high prices of feed. He was answered by the old feeder in this way: “You're an alarmist. We have soldiers and nations of peoples to feed. We must and we will do it. We're not going out of the live-stock business because feed is high. We're going to produce more beef than we ever did before. Prices will justify us in doing so. But—and here listen to me—we've got to feed in a more scientific manner, and know what we are doing.”

In this statement is characterized the feeling of many other men. Scientific feeding means more than choosing good stock and giving a certain ration. In our experience I have found our platform scales an indispensable article in determining the profit and losses in feeding live stock. We have bought, raised, and fed many classes and grades of stock, and we weigh it frequently: when it is purchased, when it is shifted from one pasture field to another, and every month or so from early fall until the following pasture season.

With the records of the weights and the amount of feed fed to the animals it is no trick at all for us to tell which are the most profitable to feed. We have bought and fed some scrub stock along with good grades, and the scales have told when we were feeding at a profit or loss. As an example, we had a mixed herd of twenty head that were making profitable gains from May, when turned on pasture, to December. Then when weighed again in January a little figuring showed they were hardly paying for their feed, and as they were in good market condition they were sold immediately.

Another advantage in keeping records of scale weights of each individual animal in a herd is that one soon learns to judge which animal is the best type to feed for the largest profit.

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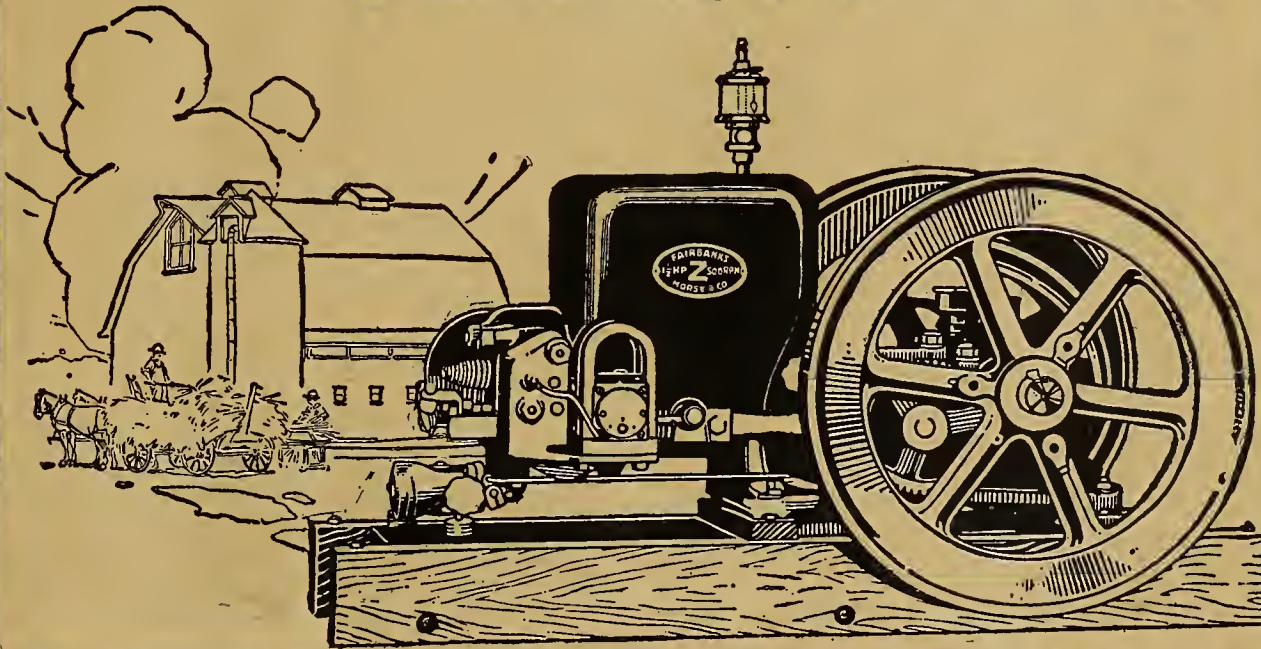
There's a “Z” engine dealer near you—have him tell you why he adds his name to ours in backing the “Z,” after comparing it with all others.

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Prices—1½ H.P. \$61.00—3 H.P. \$100.00 — 6 H.P. \$179.00 —
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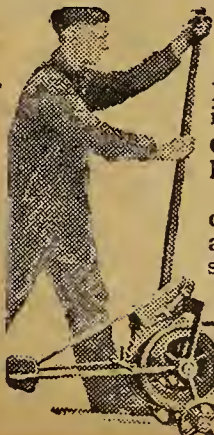
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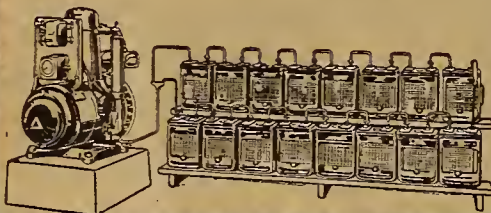
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The Mystery at Glen Cove

(CONTINUED FROM PAGE 18)

they were to supervise my living. But I was a willful girl, and they, easy-going middle-class folk, so that I did rather as pleased me. It was inevitable that I should plunge into the life of the Quartier like the foolish child I was.

"Well, to shorten an uneventful story, in the free-and-easy life of the ateliers I made the acquaintance of a man named Brandt. He was a journalist, widely traveled, apparently wealthy, and a man of, so I thought, unqualified charm. I was only nineteen—impressionable and innocent—and it was inevitable that I should lose my head. I married him.

"Of my life with Brandt I need say nothing. Suffice it that it was not long before I discovered that his "journalism" was a mere cloak to more subterranean things, and his wealth wholly fictional. In short, he was a kind of man of which, fortunately, you know very little in the United States. Of the precise nature of his activities I never learned much. He served any Government which paid him, in whatever devious fashion required.

"But the most painful discovery of all was that his charm was as fictional as his wealth. He was at heart a man of brutal temper, and more than once I was in actual peril of my life. The end must be obvious to you. In three months I left him.

"I could not go back to my old home. Pride made that impossible. So I threw myself into my work with redoubled energy, partially to forget and partially to live. The fates were kind. I had some success, and I ultimately resolved to come to America.

"Of all the family, the only member with whom I ever corresponded was my brother Ansley. He and I had always been chums, and he alone sympathized with my wayward nature. You may imagine, therefore, the nature of my feelings when, that night at the Debetts, the young guest, Mr. Carter, proved to be none other than my own brother!"

"YOUR brother?" I echoed in utter astonishment.

"Yes. But great as was my surprise at seeing him, it was as nothing to my amazement at his frown and his whispered injunction to me on no account to recognize him. I knew that he was in His Majesty's service, but of the reason for this surreptitious visit I had absolutely no idea.

"I could not take my eyes from him, and when he was summoned to the telephone I watched him go out. That explains why I alone, of those present, saw what befell him.

"In the instant before the lights went out I caught a glimpse of a figure that I had prayed never to see again—that of Paul Brandt! It was like a flare of light in my brain. Instantly I put two and two together. My brother, in the king's service, must, from his desire not to be recognized, be on a mission of supreme importance and secrecy. My husband's trade, on the other hand, I knew only too well. Whatever my brother's mission, it was plainly my husband's mission to foil it.

"I can't tell you why I moved so quickly at the sound of the shot, but something told me that the honor of my family, which perhaps I had done more to injure than anyone, was at stake. Something outside of and beyond moved me, and in the interval of darkness I flew in pursuit.

"You will perhaps be wondering how I knew where to go—if I had any plan in my head at all. Yes, I did. I had heard my husband speak of a sister living in New York, as the wife of a man named Durdeen. In my wild desperation it occurred to me that I might possibly find the man I sought at her home.

"It was a simple matter to reach the village in my own machine. There I secured a car for the ride to New York. You can imagine my annoyance when our mad ride was halted by highwaymen—none other than yourselves, whom we were obliged to take aboard.

"You can readily see why your company was so distasteful. I had no desire for the man, for whom I cared more than anyone else in the world, to discover a past which even I had all but forgotten. So I was obliged to resort to the expedient I did. You can never know the agony I suffered when I saw him fall against the gutter and lie so perfectly still." She covered her face momentarily with her hands.

"You see, Jimmy," said Steele triumphantly, "I told you she didn't mean to hurt me."

"Indeed I didn't. But I was desperate.

Well, having left you behind, I reached New York, found the Durdeens' address, and went directly there. My surmise had been uncannily correct. I found my husband, fully dressed, lying on a bed, and sleeping heavily. It was the work of a moment to slip out to an apothecary's and secure a little chloroform, and of another to administer it to him as he slept. Then I went quickly through his pockets. Again fate was on my side. For against his breast I found a packet, heavily sealed and plainly from His Majesty's government, which I felt sure must have been taken from my unfortunate brother.

"As I started to leave the apartment I heard voices outside the door, and I concluded, in panic, that it must be the owners returning. I slipped quickly into one of the side bedrooms. The voices I had heard, I soon discovered through the keyhole, belonged to none other than yourselves. But I was quite as anxious, you understand, to avoid you as anyone else, so when I had made sure you had gone into the dining-room I slipped out again.

"I had thought to escape unseen, so you can imagine my feelings of shock and chagrin when, in response to that knock on my door at the hotel, I opened it and found you, Jimmy. There was something supernatural about it, and if my need had not been so great I think I should have sat down and cried in despair. But those dispatches had to be returned to my poor brother, if he still, by any chance, lived, and, failing that, to the ambassador. So as soon as you had been abducted by that convenient porter—I had to laugh at that, Jimmy; you were so angry—I slipped out of the hotel.

"My next step was to return immediately to the Cove. The Debetts were more than a little suspicious, but they are not good liars, and it was not difficult to ascertain that in all probability my brother had not been killed. At any rate, there still remained a hope. I recalled that he had come to the dinner as the guest of Agatha Burchard, so I went immediately to her.

"Really, she is an astonishing girl. I could get absolutely nothing out of her. She merely blinked at me in that open-eyed way of hers, and claimed utter ignorance. I finally decided that she was really what she insisted she was, and turned hopelessly to go. But at the doorway, realizing that my path was blocked and that I had no other choice, I resolved to take the step of desperation and throw myself upon her mercy and discretion.

"Fearfully, as you can well imagine, I told her my story. And it was fortunate indeed that I did, for as soon as she realized that I was not a mere curiosity seeker she told me her own story.

"It seems that on a visit abroad, the previous autumn, she had made the acquaintance of my brother. This chance meeting had ripened into something more, with the result that they became engaged. There were various reasons, however, more or less wise, which persuaded them to keep the betrothal for the time secret.

"SUCH was the situation when one afternoon Agatha was dumfounded to have her fiancé, my brother, appear on the scene without any warning. His explanation was that he was the bearer of dispatches of the utmost importance. Furthermore, he had been entrusted with a mission of such supreme delicacy as not to be risked to the cables or the ordinary avenues of diplomatic communication. It had to be executed in person.

"His task, he further explained, was made extraordinarily difficult by the fact that he was under the closest espionage by persons profoundly interested in preventing the successful consummation of his purpose, or, at least, delaying it.

"Consequently, when his vessel halted to take on its pilot he managed to slip off on the smaller craft. He thought, of course, that by this move he had eluded all pursuit. But from what later transpired it seems clear that in some way he was trailed even on the smaller boat. In no other way is it possible to account for subsequent events.

"In explanation and, in a way, extenuation of my brother's next step, it must be remembered that, despite the importance of his position, he was a young man—and deeply in love. It was late in the afternoon. It was impossible to deliver his message in Washington before the next morning. He knew that Agatha Burchard's summer home was near at hand, and that there, of all places in New York, he would be free from surveillance.

"Various agencies delayed him. It was late when he arrived. And, most ineptly, Mrs. Burchard encountered him. Agatha, she knew, had engaged herself to dine at



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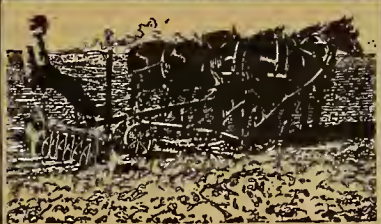
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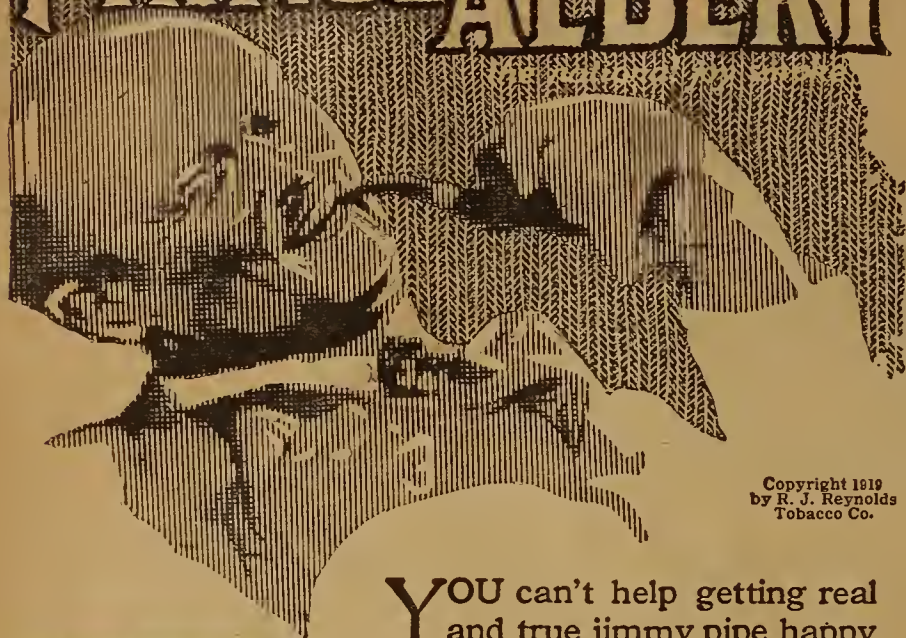
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the Debretts'. It was inevitable that she should suggest her daughter's taking her young visitor with her. It was an opportunity to see a little more of each other, and they thus found themselves where you met them.

"Of the subsequent terrible events I have already supplied the little you did not know. What followed is easily explained. In the excitement after the shooting, Agatha slipped to the side of her fiancé. She quickly determined that he still lived. And from what he had told her she knew that, of all things, he would wish to avoid recognition.

"In the excitement of my flight and Leslie's pursuit she was able to attract attention away from him, to slip back and, by exerting all her strength, to assist him out on to the porch. Though very weak, he was able to extend her some assistance, and between them he was got into her electric brougham, standing outside. Then she returned to the excited party, for a decent interval before flight.

"She could not, of course, take the poor lad to her home without making explanations, so it was decided to install him in an abandoned toolhouse near the water.

"In accordance with his instructions she slipped to the village that night, and routed out the telegraph operator, in order to send a message. It was in code. Its results was to bring a warship secretly to the Burchard waterfront.

"On this vessel my brother was transported to Washington. In the meantime, however, a wire had come to Agatha which was quite incomprehensible to her. It was obviously in code. It could not have come from my brother, because he had only just left. It must therefore, she judged rightly, be for him. So she rewired the message to him, at a predetermined address in the Capital.

"What this message was, and how it came to him, became clear to me only with what I learned this morning. It appears that in some way the code book, utilized by men working as my brother was, had fallen into improper hands. The message, therefore, though fraudulent in intent, seemed a perfectly correct request from another operative to my brother to meet him at a certain rendezvous in Washington.

"**T**HAT rendezvous, my dear Jimmy, was the public house you discovered. My brother, however, was suspicious. It was not at all clear to him how his presence at Agatha's was known even to his own forces. He concluded, and rightly, that there was something wrong about it.

"At any rate, he went to the saloon fully prepared for any emergency. In fact, he entered the drinking booth with his hand on the trigger of his revolver, concealed in his pocket. It was fortunate that he did. One of his antagonists fired almost immediately, and the other's knife was out. But Ansley was too quick for them. Ready as he was, he fired at once through his coat. You saw the result yourself.

"One of the men he shot was the Japanese butler you knew as Toguchi, a former naval officer of the greatest intelligence. Some time ago, however, he was discharged, and for the past three years has been receiving a fabulous salary from the German Government. His presence in the Debrett home I know must have been attributable to the admiral's naval construction designing. Toguchi knew and recognized my brother as a British naval officer. He must have known, from every circumstance of my brother's appearance in the house under an assumed name, that a mission of the greatest importance was in progress. He knew the probable import of this mission.

"Whatever he did not know was revealed to him by the man who later was killed with him. This man no more expected to find Toguchi in the Debretts' house than Toguchi expected to find my brother and this other man there.

"Toguchi's aid, so unexpectedly offered, was employed by this man whose instructions were to prevent the completion of my brother's mission in Washington. My brother's shots not only ended the work of an intelligent espionage servant of the German Government, but they also ended the career of one of the most dangerous men in Europe, a man as unscrupulous as he was clever, a man to whom murder was of no consequence whatever in attaining his ends, who cared only for the highest bidder and to whom honor was an empty phrase. That man, Jimmy, was my husband—Paul Brandt!"

I could say nothing as I listened to the unfolding of the strange narrative. At the dramatic climax my jaw hung. There was complete silence among us for several moments. It was Steele who broke the tension with an easy laugh.

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"You look like a codfish in the last stages, Jimmy, old boy!"

"Isn't it clear?" asked Marie with a smile.

"N-not entirely," I replied. "Up to a certain point it's as simple as 'Little Red Riding Hood,' but—"

"What don't you understand?" asked Steele.

"About the two devils—your arrest—our sojourn in White Plains—and all the rest of that. I am quite as dull as you often assure me I am, no doubt, and I am extremely sorry that I can't see it, but I really haven't a glimmer of an idea as to where the United States Secret Service comes into the story. Perhaps we aren't through with them yet?" I suggested, with a sudden sinking of the heart.

"No," was the surprising reply, with a negative shake of the head. "Not quite."

"You mean—you're still being followed?"

"Not exactly that, but I suppose you read the newspapers, Jimmy?"

"Well—what of it?"

"Then you no doubt are aware of the fact that a certain dist—well, perhaps one should say, notorious—public figure looks upon war with a commendable distaste. You have also, no doubt, surmised that his intelligence is hardly equal to his high ideals."

"You are speaking of—"

"We need mention no names, my boy."

"Go on then."

"This gentleman labored under a curious illusion. If certain demands were made upon this nation from certain quarters it was his idea that by ignominiously granting them we should avoid the horrors of war. Conversely, he felt, and quite sincerely, I believe, that if assurances of aid came from another quarter, enabling us to make a refusal with a strong front, it would inevitably mean war. He never played poker, you see, Jimmy, and he didn't know when he was being bluffed."

"O-h-h—so that's it, is it?" I whistled.

"Exactly. It became his duty, as an honest pacifist, to spare his fellow countrymen from the horror of war by preventing, at all costs, any assurances of support from reaching his own Government until our craven submission to blackmail had been dispatched and the damage done."

"IN THE performance of that duty his path crossed ours; or, rather, ours crossed his. American Secret Service men were in the web about Marie's brother. They also, without knowing of Brandt's operations and Toguchi's incidental aid, were trying to prevent the completion of the mission."

"They were deflected from the true trail, and followed Marie's. They found us, and received instructions to prevent our supposed co-operation in getting the communication to Washington. Under orders we were duly filed away—in White Plains. But, thanks to your good offices in the chimney, I was able to get hold of a letter he had himself written, and signed by his own distinguished signature. I resolved to pay him a visit. Late last night I did—and he has acted with commendable promptness," he drawled, extending the sheet to me. "You will observe that our friend's withdrawal from public life is attributed to—er—ill health. That was my suggestion."

"And in a day or two, Jimmy," went on my friend quietly, though I fancied I saw a faint hardening of his lean jaws, "a note will go forth from this Capital which will indicate to the world that the Yankee has not yet forgotten that he knows how to play poker. And you and I, Jimmy," he whispered softly, "will have had a good deal to do with sending that note!"

I sat staring at the newspaper, bereft of all power of speech. I was aroused by Steele's quiet voice.

"And now, Jimmy," he said, a frank grin spreading over his features, "I know you're aching for a chance to take a stroll through the nation's capital. They tell me the Patent Office is interesting—"

I have been told that I am obtuse, but the expression on that rascal's face, to say nothing of Marie's sudden pinkness, would have penetrated even a thicker head than mine.

"I—I think I shall climb the Monument!" I exclaimed briskly.

They apparently did not hear me. I sighed. Ah, well, I had to envy them. And then I thought of the dependable, well-ordered quarters to which I was returning, and the quiet ministrations of Parkes, and the freedom and— "Confound it, you old fool," I exclaimed to myself, "you know you don't envy them!"

And yet. . . .

[THE END]

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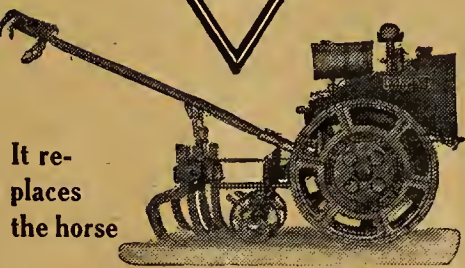


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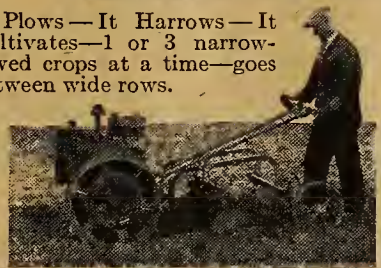
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Common-Sense Dairying

By Mrs. L. E. Armour

I OFTEN hear disparaging remarks about country butter. Being a country woman, I do not enjoy this, but at the same time I know that it is a fact that far too many farm women do not know how to make good butter. The cream is allowed to become overripe, impairing the flavor; or it is churned at too high a temperature, with the result that a white, puffy substance is obtained.

Now, I do not milk a sufficient number of cows to justify the title of dairy woman, but I sell a great deal of butter, and when I secure a customer he is a lasting one. I am careful to see that all milk vessels are kept clean and the milk and butter carefully handled. Like most country people, my cream is ripened near the fire in a jar that will allow a circulation of air. Closed vessels give milk and butter an objectionable flavor. A clean cloth is tied securely over the top of the tall crock which holds the cream; this excludes all dust but does not entirely exclude the air.

When the cream is ready for churning it is always warm, and if churned immediately the butter is sure to be white and puffy, so I set the crock back from the fire until the cream has cooled, then I churn it. If the temperature is too low it foams, and none but tiny granules of butter form.

In such cases the crock is set in a vessel of warm water, and the churning deferred until the correct temperature is reached. A practiced ear can determine this very readily by the sound produced. The crock is removed from the water when right temperature is reached, the churning finished,



the butter drawn, washed, salted, and molded into one-pound packages.

To mold butter perfectly the mold should first be scalded, then well rinsed with cold water, so the butter will not stick nor be softened where it touches the mold. After it is molded it should be wrapped in clean white cloths which have been rung from cold water, preventing the butter from sticking to the cloths.

If I were a scientist I might be able to tell the exact difference in the composition of the milk when green food is absent from the diet, but as it is I know only that there is a difference. This is the second winter in which I have milked a cow that the previous owners were compelled to sell on account of the extremely strong flavor of her milk and butter the two previous winters. She never freshens until May or June, so the cause could not be attributed to that source. When the milk was first drawn, no foreign odor or taste could be detected; but after standing a few hours the cream could not be used even in coffee. She is a fine cow, so when the owner decided to sell her we bought her.

This man had written to our experiment station and received a formula of medical treatment which gave only temporary results, so he became disheartened. I used all precautionary measures against this trouble from the beginning, but it came with the coming of last winter. As a last resort I strained the milk as usual immediately after drawing, set the crock containing it on the stove, allowed the milk to become hot, but not to boil or even simmer, then set aside to cool, and managed it in the usual way.

I never tasted better milk and butter. The same trouble appeared again this winter, and the same management overcame it, so I know it is reliable, and believe this satisfactory experiment will be of interest to others. It is a form of sterilization, and it surely has been a valuable help to me.



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What's What in Cheese

By R. Robinson

BRICK cheese takes its name from the fact that it is about the size and shape of an ordinary brick, and because common bricks are used as weights to press it in the molds. It is never put into a machine press. Brick cheese is distinctly American, and, next to American Cheddar, is more commonly used in this country than any other variety. It is mild, pleasant to the taste, and very palatable. It is made from fresh cow's milk.

The constituents are approximately the same as Cheddar, when it is made from whole milk; but the milk is sometimes partly skimmed, producing an inferior article which can be distinguished by its tough, leathery consistency. When cut, a good brick cheese should be quite close-grained, silky in texture, break off short, instead of bending, when sampled, feel perfectly smooth on the tongue, and have no rank odor. This variety of cheese cannot be made with full success under the factory system as generally practiced in making Cheddar, especially in warm weather, as the milk must be strictly sweet and fresh if a good quality is to be made. For this reason it should be made immediately after milking, twice a day, and is best when made at home on the farm.

Any dairyman who is out of reach of a factory or creamery may make this variety of cheese. It can be made from the milk of one or any number of cows. The cheese averages about five pounds to a brick. Two or three adjoining farms that can conveniently bring their milk to one place twice a day, during warm weather, can make it successfully.

The plant costs very little, as molds, tables, shelves, etc., can be made by any handy man, which, with a vat, a heating apparatus of some kind, and a cool, damp cellar for curing, are all that is required; no press, hoops, bandages, or coloring are used.

The cheese is sold at about four weeks old, and the price is higher than for Cheddar, besides getting at least 10 per cent more cheese from the milk. The market is sure if the quality is right. I might say that it is not difficult to make when the idea is once mastered.

They Sell Too Soon

Next in importance comes Swiss or Emmentaler cheese, which originated in Switzerland. Before the war 18,000,000 pounds of Swiss cheese were imported every year, though that is probably a small item compared with what is made in Wisconsin, New York State, Minnesota, and in less quantity in a few other States. It is usually sold as American or domestic Swiss, and a great deal of it is of just as good quality as the imported article. The principle trouble is that our American dairymen are in too much of a hurry about selling. They have not the patience to wait six months or a year for their money. Therefore the trade in American-made Swiss cheese suffers on account of its being put on the market while too young, for time only can impart that distinctive flavor and texture that is characteristic in good Swiss cheese.

In food value the best imported Swiss contains more water than American Cheddar, or American Swiss either. One of our faults is that we make it too dry. Swiss cheese is not well adapted to the factory system, though large quantities are being made in American factories.

The great mistake the Swiss and other Europeans make when they come to this country is that they make a secret of any knowledge they may have about the process of making whatever kind of cheese is most common in their home land. Had Americans acted on that principle our American Cheddar could never have been the success it has proved to be. On the contrary, our cheesemakers met in public gatherings and exchanged or discussed their ideas. Those who were capable wrote on the subject. In fact, the smallest detail became public property, and until foreigners who make cheese peculiar to foreign countries get together and act in the same way, their cheese business will always be unsatisfactory both to themselves and to the trade.

No branch of dairying, or farming of any kind, can be made a success by covering it with a basket. The consequence of that policy is that Swiss and several other kinds of cheese are being used as a condiment by the few, rather than as a staple article of food by the many.

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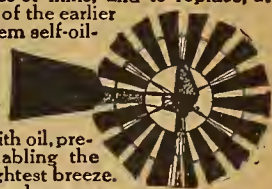
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Get your copy of Galloway's money saving book for 1919. Buy all your farm supplies at wholesale—direct from Galloway's factories. Use this book as your buying guide. We ship from our immense factories at Waterloo or big warehouse stocks in Chicago, Kansas City, Council Bluffs, St. Paul and Winnipeg. Write today to **William Galloway Company,** 397 Galloway Station, WATERLOO, IOWA.

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CHICAGO FLEXIBLE SHAFT COMPANY
Dept. 140, 12th St. and Central Ave., Chicago, Ill.

The Tramp Who Bought a Dairy Farm

[CONTINUED FROM PAGE 11]

stayed at home and asked no favors of anybody. As the farm was so small I did not raise any grain, and so I was able to do all my work alone, even haying. I was becoming angry, and the madder I got the more determined I was to make good. "I'll make my name stand for something yet—I'll make them forget the generation in between," I told myself over and over that summer, and gradually I formed a plan.

Most of the farmers took their milk to a cheese factory, or to a local creamery. Home butter-making was a lost art. I knew that there were many people who preferred dairy butter, and I knew also that if it was made under clean, sanitary conditions there was a market for it at prices as high as creamery. At the school one of my duties had been to help in the dairy, and quite often I had made butter alone; thus I felt that I could produce a first-class article.

My way of reasoning was something like this: "Cleanliness, industry, and honesty seem to be the qualities they think that I lack; but if I win out in a business venture that demands these qualities they cannot help admitting that I am all right."

But even as I planned my spirits went down as I thought of my poor old cows that were fast drying up, and it was only the middle of September. One of my first purchases had been a pair of scales and a milk tester, so I knew just what my herd had done, and it was nothing to brag about. Those six cows which had been fresh in April had given 19,000 pounds of three per cent milk, making 570 pounds of butterfat. Not much more than one good cow should produce. Truly, at this rate I would not get very far.

THEN I did what caused the people to call me a fool as well as a rascal: I sold that herd of cattle to a stock buyer for \$250—cows were not so high then as they are now—and I thought I was getting a pretty fair price for the scrubs. This amount added to my milk checks—my living had come mostly from the garden and chickens—gave me a little over \$400, and as my payment on the place did not have to be made until spring I felt that I could invest my money the way I wanted to. At an auction in the next county I picked up an old Jersey that was said to be a good producer. She was not registered, was not even a full blood Jersey; but her owner told me things and proved them about her that made me willing to part with \$150, which was a big price for a cow then. Good old Buttercup! I never regretted paying out that money, for she gave it back to me many times over. Another \$100 went for a three-year-old Jersey which was practically pure-bred, and after I had spent another \$100 for a bull and \$50 for a yearling heifer I went home proud and delighted with my new beauties. As I did not have quite so much stock to feed, there was some hay to sell, which, together with my potato money, brought in enough to make the payment and still left some for running expenses.

Then I went to work. A small building apart from the main house, and which had been used for a summer kitchen, was taken for a dairy house, and I scrubbed, cleaned, and painted until it was as fresh as one could wish. Running water was out of the question for me just then, but as the well was right at the door I felt that I could get along for a while. I installed a stove and ventilating system similar to that used in rural schools, for I knew there must be pure air, with no odors to be taken up by the cream. First, last, and all of the time there must be cleanliness, and I invested in some spotless white suits.

Once more I must say, "Good old Buttercup!" She freshened in October, and looking over her record I find she produced 10,000 pounds of milk testing 5.1, during a milking period of 320 days. This made 510 pounds of butterfat, or nearly as much as that made by the six I sold. Then I resolved that a cow which could not produce 8,000 pounds of milk testing 4.5 could not stay on my place. I have kept that resolve, carefully culling out those that did not come up to the mark. If my cows had been Holsteins I would have set the standard at 10,000 pounds with a lower test.

As I had thought, it was not difficult to sell good dairy butter. I did not try at Mayson for obvious reasons, but took my first lot to a town ten miles distant, where I sold it to a hotel man. He said that if I kept the quality up he would willingly pay



Copyright by Kadeland Halbert

"So I am leaving in your hands the only thing that matters now—and God bless you."

That is part of a letter the Editor of the WOMAN'S HOME COMPANION received from a reader.

It is but one of over three thousand letters very much like it.

They came (and are still coming daily) in immediate response to an announcement in the February COMPANION of a service for COMPANION readers who seek news of boys in France.

Three Thousand Appealing Letters

filled with words describing feelings almost too sacred and intimate to quote—pleading for information about three thousand big strapping American boys listed as MISSING.

What must be the attitude toward this magazine that mothers and young wives and girl sweethearts will confide in it in this manner? What is it about the COMPANION that inspires the personal friendship of more than a million women?

It is this: The WOMAN'S HOME COMPANION, in spirit, in tone, in everything it does, lives up to the letter of its name. It works over its readers' problems of babyhood, and clothes, and household affairs, and cooking, and gardening, and building, and home furnishing, and other interests in such a way that it becomes

to each reader not merely a companion, but a friend.

And so, when this opportunity to be of an extra-special service came along, the COMPANION was quick to grasp it. And COMPANION readers, knowing that the COMPANION always does what it says it will do, were quick to take advantage of it.

The Woman's Home Companion feels that the highest proof of its success lies in the fact that its readers come, not formally, for paid advice, but unreservedly, intimately, as to a bosom friend—for expert advice which is always given frankly, fully, freely and gladly, as a bosom friend would give it.

WOMAN'S HOME COMPANION

The Crowell Publishing Company

Woman's Home Companion

The American Magazine

Farm and Fireside

creamery prices, and be glad to get it, or he thought that it went further, and if it was good his patrons liked it just as well. On the next trip I got the other hotel man and a boarding house, and that year these three took all the butter I could make. During the second year I bought two more good cows, put in running water and other improvements, and placed a neat sign in front of my place which told the public that this was "The Jack Drewe Sanitary Dairy." My butter was put up in neat, attractive one-pound cartons with the label "Jack Drewe Brand" printed upon the outside. My house and out-buildings were all painted a pure white, and everything about the premises was kept as orderly as possible.

As I reasoned, people could not keep on thinking a man was all wrong if they had to admit that he was successful in his business. As the years went on and I added customers to my list I found that the men who had formerly wished me a good day and passed on now stopped for a talk. I was surprised to find how often I was consulted and listened to by the other farmers, and long before my Yellow Bess, daughter of Buttercup, went over the top in our local cow-testing association, they had conceded that I was a pretty good judge of a dairy cow.

While striving to reach one goal I unconsciously attained another. I was surprised when a representative from the university farms wished to buy Yellow Bess for their experiment station. They said that the monthly record she had made—90 pounds of butterfat—was remarkable considering that she had not been given special care or feed. She was worth \$500 to them, and they paid me another \$100 for her three-months-old heifer calf.

During these years I had married—not one of the Gilbert Hall girls, but the daughter of the hotel keeper who had bought my first butter. Our friendship, which later developed into love, dated from that time. Since then my wife has told me that she was sure a boy that could make such delicious butter could not be wholly bad. Never did man have a more loyal partner.

IT WAS during the last summer, right after the sale of Yellow Bess, that we came to the conclusion that our farm was too small. I also had awakened to the fact that I was neglecting my opportunities, and felt that I should get into pure-bred stock.

The farm that I had always wanted was for sale, and we talked the matter over, deciding that we would buy it. My place, which was now all paid for, would bring \$6,000, and we had \$2,000 more in the bank.

"That will leave us short \$2,000, but I can get it easily," I said.

"While you are about it, you had better borrow \$5,000 more to buy the adjoining farm—we will need it—and another \$1,000 for the young registered Jersey stock we are going to buy," advised Ellen.

I was a little taken back at this suggestion, for I was not fond of debt, and did not think that the bank would let me have so much. I was a little uncertain when I broached the matter at the bank, but they were very pleasant.

"Certainly, Mr. Drewe," said the smiling banker. "Very glad to accommodate you."

After the necessary papers had been made out, he shook hands cordially, saying, "I am mighty glad to see you go on the old place; a Drewe made it and a Drewe should farm it."

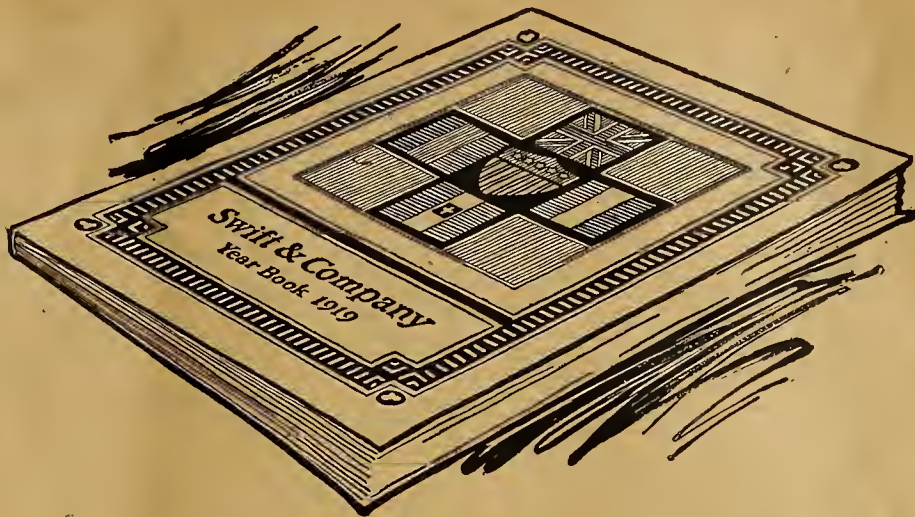
I smiled as I left the bank, thinking of the time—it was during my second year—that I had asked for a couple of hundred dollars and had been refused. As I passed Franklin's grocery store I also remembered the time he would not give me credit. "Wonder how I stand with him now," I said to myself, and went inside, where I ordered almost thirty dollars' worth of goods.

"Just charge this, will you?" I said carelessly, and Mr. Franklin beamed and replied: "Sure—you bet! Anything else, Mr. Drewe?"

Now this sounds as though I was still resentful, but I am not—at least not very much. They were clean, respectable people, and until I had proved that I was the same they did not want me—that was all. A good name is a mighty fine thing to have, and I did not have it.

To-day we moved to our new home—to the farm that my grandfather carved out of the wilderness.

ONE of the world's authorities on tractor design and internal combustion engines gets down among us and talks our language in telling how to get six per cent from your tractor, in the April number.



Swift & Company's 1918 profits shown in this book

Send for a copy. Contains facts and figures that will give you a better understanding of the conditions that govern the sale of your cattle, hogs, and sheep. Write for your copy NOW—it is free

Do you understand clearly the things that determine the prices paid for your live stock?

Do you know why the packers are interested in stockyards?

Do you know how the packer's dollar is disposed of—how much goes to you for your live stock, how much of it goes for actual cost of doing business, and how much is left the packer for his services?

Do you want to know the real facts about the Federal Trade Commission's investigation of the packing industry?

There is no mystery in the live stock and meat business. It operates under conditions of intense competition and, like every other

industry, is controlled by fundamental business principles.

Swift & Company's 1919 Year Book contains many pages of valuable information along the lines of the foregoing questions—facts and figures that will give you a clearer understanding of market conditions and the sale of your animals.

It presents a review of Swift & Company's operations during 1918, and shows that the profits earned (about 2½ cents on each dollar of meat sales) were too small to have any noticeable effect on live stock and meat prices.

Send us your name for this valuable book now—a postal will do.

Address

Swift & Company

4103 Packers Avenue, Union Stockyards, Chicago, Ill.

Established 1868

A nation-wide organization owned by more than 23,000 stockholders



Wear Absolutely Waterproof Steels
Cost less than leather, wear 3 to 6 times longer, are lighter, easier, stronger. Stop big shoe bills. Eliminate repair bills. Stop foot troubles. Prevent Colds, Corns, Bunions. Keep feet warm and dry in snow, rain, mud, slush. Never change shape—comfortable always. Free Shoe Book Tells All. Write Today. N. M. Ruthstein, V. P.
STEEL SOLE SHOE CO., Dept. A 48 RACINE, WIS.

ROUGH ON RATS

This oldest and largest selling exterminator rids premises completely of rats and mice. Mixed with foods that they will eat; kind of food can be changed when necessary.

Never Failing Exterminator

No matter how thick rats and mice are, "Rough on Rats" will get them ALL in two or three days. They don't die in the house—no odor. Our booklet—"Ending Rats & Mice"—tells how to rid any house, store, warehouse or building of rats and mice.

Sent free if you write.

E. S. WELLS, Chemist
Jersey City, N. J.



You are sure of a square deal if you mention Farm and Fireside in answering advertisements.

\$19.95 Upward

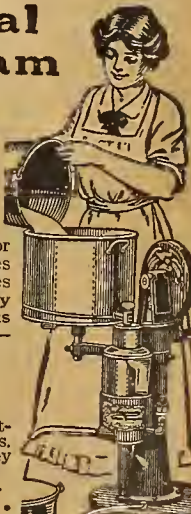
Sent on Trial American Cream SEPARATOR

Thousands in Use giving splendid satisfaction justifies investigating our wonderful offer: a brand new, well made, easy running, easily cleaned, perfect skimming separator only \$19.95. Skims warm or cold milk closely. Makes thick or thin cream. Different from picture, which illustrates our low priced, large capacity machines. Bowl is a sanitary marvel and embodies all our latest improvements. Our Absolute Guarantee Protects You. Besides wonderfully low prices and generous trial terms, our offer includes our—

Easy Monthly Payment Plan

Whether dairy is large or small, do not fail to get our great offer. Our richly illustrated catalog, sent free on request, is a most complete, elaborate and interesting book on cream separators. Western orders filled from Western points. Write today for catalog and see our big money saving proposition.

American Separator Co., Box 1058, Bainbridge, N. Y.



Poultry Raisers

**You Haven't A Moment To Lose
Get Your Hatching Outfit-Now!**

Early hatches mean healthier chicks, bigger broilers, and more laying hens during the winter months, when egg prices are highest.

Now is the time to start a Champion Belle City making money for you. Of course, the late hatches pay big, too, but why not get the extra profits from the early ones—besides you are sure to have the biggest hatches of strongest chicks when you use my

\$10⁹⁵ 140-Egg Champion Belle City Incubator

With Fibre Board, Double-Walled construction that has led the field for over 13 years—Self-Regulated—Hot-Water Copper Tank—Thermometer Holder—Safety Lamp and Deep Nursery.

When ordered with my \$6.35 World Famous 140-chick Hot-Water Brooder—Double-Walled, big, roomy—guaranteed to raise the chicks—making a complete outfit—both only \$15.95.

Freight Prepaid East of Rockies Towards Express

And allowed to points beyond. You cannot get a better Hatching Outfit—used by Uncle Sam, leading Agr'l Colleges and over 740,000 successful poultry raisers.

With this Guaranteed Hatching Outfit and my complete Guide Book for setting up and operating, you are sure to have poultry in abundance. And you can easily

Share In My Special Offers Of \$1000 In Gold

They provide easy ways to earn extra money. Save time—Order now, from this advertisement, or write for my big Free Catalog "Hatching Facts" before you order. Jim Rohan, Pres.

Belle City Incubator Co.
Box 100 Racine, Wis.




Moving the Egg to Market

By S. O. Bryant

I HAVE found much more satisfactory poultry profit from a high-class private trade which I have succeeded in developing than when I depended on hucksters, grocers, and shipping to commission houses. Of course, it is absolutely necessary to have the quality of the highest when selling to selected customers, but the producer of poor-quality produce is no longer getting anywhere these days, no matter what his line of business.

I find that the most profitable customers will not hunt for the poultryman. They must be rustled for. But there are well-to-do homes in every good-sized town and city where a sample of superfine eggs, backed up with a "money back" guarantee, will give you a chance to furnish some trial orders. It then only requires fancy-quality eggs and poultry invariably delivered in the pink of condition to make your customers permanent. There are also good prospects for profitable customers among summer and winter hotels that cater to the trade of wealthy patrons, sanitariums, etc. All of these have furnished me outlets for high-grade poultry and eggs.

An attractively printed notice is placed in the top of each of the pasteboard cartons in which my eggs are delivered to my customers, worded as follows:

SUNNYBROOK FARM EGGS

These eggs are guaranteed to be less than thirty-six hours old when shipped. They are the product of pure-bred, healthy hens which are housed and fed according to strictly hygienic principles. The eggs are therefore warranted strictly fresh and sterile.

MONEY BACK

if found in any way unsatisfactory. Whenever more of our poultry products is wanted, telephone 5120.

Of late I have found that the light metal shipping cases used by squab breeders in which to ship their squabs to market are equally satisfactory for shipment of high-grade broilers, roasters, capons, and eggs as well, to my special customers by parcel post. These metal cases are made in two parts, one telescoping into the other, thus saving space.

Aluminum or an alloy of this metal is the choice of material for these containers, it being rustless, light, durable, and so easily kept clean. There are combination cases designed for shipping eggs, butter, or dressed poultry. For eggs, cushion fillers are used in these cases.

Postage within the 150-mile zone is not prohibitive for select produce. The return postal charge for the empty containers is about half that of the loaded ones. For valuable squabs and broilers shipped by express in hot weather the metal cases are placed in wooden boxes surrounded with ice.

Of all the eggs now shipped to market, about one dozen from each heavy-laying hen is lost annually through breakage before the eggs reach the consumer. This makes a loss at a low estimate of 36 cents to be deducted from the income from every good hen in the flock, or over \$150 from a flock of 500 layers is lost through breakage during transportation.

But this enormous loss in transit has been proved unnecessary by the government experiments carried on for a period of two years. In these experiments the eggs were shipped in carload lots an average of 1,200 miles per shipment. The secret of preventing the loss included in "checks," "dents," and "leakers" was made possible by using nothing but standard cases, symmetrically made and kept in good condition, and by the use of nothing but new medium fillers and cushions of excelsior placed on the top and bottom of each case. Corrugated paper for cushions instead of excelsior answered the purpose equally well.

Not only is right packing of the cases a requirement of safe shipping, but proper loading of the cars and right refrigeration were found equally important.

This whole matter of the safe transportation of eggs is one that poultry associations, as well as individuals, must take up and push to a successful solution. This average loss of \$1 of the income from each three hens is eventually borne largely by the men who feed the hens. The Government stands ready to place the information it has obtained in the hands of every egg shipper, which will make clear just where the blame for the breakage and loss must be placed and just how this loss may be avoided.

40 EGGS INSTEAD OF 11. HATCHED FINE

Mr. Guthrie Made Big Egg Profit. Gets Lots of Chicks, Too

"When I read about Don Sung, I was getting 11 to 14 eggs a day. I tried it and my eggs increased to 40 a day and sometimes better. I heartily recommend it to all poultry raisers. I have 200 little chicks off and 380 to come off in the next 15 days."—C. A. Guthrie, Nekoma, Kans.

Mr. Guthrie wrote this letter last spring after using only \$1.50 worth of Don Sung. His hens laid four times as many eggs, and the eggs hatched better. It paid him and it will pay you. At our risk, accept this offer:

Give your hens Don Sung and watch results for one month. If you don't find that Don Sung pays for itself and pays you a good profit besides, simply tell us and your money will be refunded.

Don Sung (Chinese for egg-laying) works directly on the egg-laying organs, and is also a splendid tonic. It is easily given in the feed, improves the hen's health, makes her stronger and more active in any weather, and starts her laying.

Try Don Sung for 30 days and if it doesn't get you the eggs, no matter how cold or wet the weather your money will be refunded by return mail. Get Don Sung from your druggist or poultry remedy dealer or send 50 cents today for a package by mail prepaid. Burrell-Dugger Co., 155 Columbia Bldg., Indianapolis, Ind.

SOFT-HEAT

Greatest Incubator Discovery in 50 Years.
Insures Strong, Healthy Chicks from every good egg. Iron-Clad Guarantee.

Porter Soft-Heat Tubeless Incubator combines hot air and water. Automatic control of heat, moisture and ventilation. Center heat plan, round nest, eggs turn semi-automatically without removing tray—saves time and money. Simple, safe, sure.

Write for Big New Free Book.

PORTER INCUBATOR CO., Box 12, Blair, Nebraska

Save the Baby Chicks

Our hook, "CARE OF BABY CHICKS," and a package of GERMOZONE are the best insurance against chick losses. Those formerly losing more than half their hatch now raise better than 90 per cent. To you who have never tried GERMOZONE, we will send postpaid, book and package as above. You pay, if satisfied, 75c; 60 days' trial. We trust you.

Druggists and seed dealers sell GERMOZONE, the best poultry remedy and preventive. For old and young—howel trouble, colds, roup, musty or spoiled food, limber neck, chicken pox, scurvy, skin disease, etc. Sick chicks can't wait. Do it now.

GEO. H. LEE CO., Dept. 450, Omaha, Neb.

62 BREEDS

Most Profitable Fur-Bred Chickens, Geese, Ducks, Turkeys, Hardy fowls, eggs, and incubators at lowest prices. America's Pioneer Poultry Farm. Write for valuable Poultry Book FREE. F. A. NEUBERT, Box 314, Mankato, Minn.

Poultry Book

Latest and best yet; 144 pages, 215 beautiful pictures, hatching, rearing, feeding and disease information. Describes busy Poultry Farm handling 53 pure-bred varieties and BABY CHICKS. Tells how to choose fowls, eggs, incubators, sprouters. Mailed for 10 cents. Barry's Poultry Farm, Box 39, Clarinda, Iowa

Baby Chicks

25 Leading Varieties—Safe delivery guaranteed. Postpaid. One of the largest and best equipped hatcheries in U.S. Catalog FREE. Miller Poultry Farm, Box 555, Lancaster, Mo.

INCUBATOR BARGAINS

Before you buy an incubator get our Special Bargain List and new complete catalog of incubators, brooders, ready built houses, supplies, thoroughbred poultry, eggs and baby chicks. Write to-day.

Cycle Hatcher Co., 65 Philo Bld'g, Elmira, N. Y.

Money in Poultry

Small Investment, Big profits. Our stock pays best. Thousands of prizes at big shows, best layers, lowest prices, all varieties. Big Free Book tells all about it. Write today.

Crescent Poultry Farm, Box 31, Des Moines, Ia.

POULTRY AND PIGEONS FOR PROFIT

Foy's big hook tells all about it. Contains many colored plates—an encyclopedia of poultry information, poultry houses, feeding for eggs, etc. Written by a man who knows. Sent for 5 cents. Low prices, fowls and eggs.

FRANK FOY, Box 4, CLINTON, IOWA

SURPRISING INCUBATOR Bargain ONLY \$6.95 for the famous Liberty Hatcher

The greatest incubator value at any price. Built round with a central heater; no cold corners which mean unhatched eggs. Perfect regulation of heat, ventilation and moisture, roomy chick nursery, visible egg chamber easily accessible, triple wall, water jacketed heat flume, sloping egg tray keeps small ends of eggs always downward—enables chicks to develop more perfectly. Economical to operate. \$6.95.

Order from this advertisement. Send check, money or express order, we ship at once, f. o. b. Quincy, Ill. For shipment by parcel post include postage for 21 lbs. weight. If you are not entirely SATISFIED after 30 DAYS' TRIAL write us and we will refund all money you have paid. We are responsible. In business in Chicago 46 years. Ask your banker. You also need our splendid "Liberty Hatcher" 70 chick capacity, oil heated, self regulating. Weighs 14 lb. \$4.50 f. o. b. Quincy, Ill. For larger incubators write today for special catalog.

B. F. Gump Co., 443 S. Clinton-St., Chicago, Ill.

Ironclad

The Iron Covered Incubator
BIGGEST HATCHING
Value Ever Offered

Investigate the Ironclad Incubator before you buy. Get my new catalog and learn why the Ironclad is the safest and best incubator. It tells how they are made and why they are better. My special offer of iron covered incubator and roomy brooder for only \$14.75 freight paid east of Rockies.

30 DAYS' TRIAL

Money Back If Not Satisfied

is the greatest incubator offer of the season. You can use the machine for 30 days and if not satisfactory, we will refund your money and pay return freight charges. Machine come to you complete, ready to use, and accompanied by a

10 YEAR IRONCLAD GUARANTEE

Both for \$14.75
Freight Paid East of Rockies

150 Chick Brooder

MADE OF CALIFORNIA REDWOOD

Galvanized Iron, Asbestos, Redwood, Insulated Board

Don't class this big galvanized iron covered, dependable hatcher with cheaply constructed machines. Ironclads are not covered with cheap, thin metal and painted like some do to cover up poor quality of material. Ironclads are shipped in the natural color—you can see exactly what you are getting. Don't buy any incubator until you know what it is made of. Note these Ironclad specifications: Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering. Large egg tray, extra deep chick nursery, hot water top heat, COPPER tanks and boiler, self-regulator, dyes thermometer, glass in door, and many other special advantages fully explained in free catalog. Write for it TODAY or order direct from this advertisement.

IRONCLAD INCUBATOR COMPANY, Box 51, RACINE, WIS.

Why Take Chances? Find Out What An Incubator Is Made of Before You Buy

Why Pay More

For only \$14 you can get these two unbeatable machines, delivered, freight paid east of the Rockies. You take no risk—money back if not satisfied. You can order direct from this ad. Ask the publisher about us.

Both Machines \$14
Freight Paid For Only

130 EGGS

Made of California Redwood

130 CHICKS

30 Days' FREE Trial

MONEY BACK IF NOT SATISFIED

10-YEAR GUARANTEE

Send for our Free Catalog and we will send you a sample of the material used in Wisconsin Incubators and Brooders. Then you will know which machines are built best, which will last longest and which will give you the most value for your money. One good hatch will pay for a Wisconsin outfit and more. Why take chances? We give you

180 Egg Incubator and 180 Chick Brooder both for only \$17.25

Wisconsins have hot water heat, double walls, air space between double glass doors, copper tanks and boilers, self regulating. Nursery under egg tray. Made of finest, select, clear CALIFORNIA REDWOOD, not pine, paper or other flimsy material. Incubator and Brooder shipped complete with thermometers, egg tester, lamps, everything but the oil. This is the best outfit you can buy. If you don't find it satisfactory after 30 days' trial, send it back. Don't buy until you get our new 1919 catalog, fully describing this prize winning outfit. WRITE FOR IT TODAY. You can't make a mistake in buying a Wisconsin. On the market 15 years.

WISCONSIN INCUBATOR COMPANY, Box 48, Racine, Wis.

175 Chicks



Didn't Lose One!

G. W. Miller of Pittsburgh, Okla., writes: "I used Reefer's Ready Relief for bowel trouble for my baby chicks and out of 175 hatched I haven't lost one." You can save your little chicks, too, if you use Reefer's Ready Relief and protect them from the dreaded White Diarrhea. Give them this new scientific remedy as soon as they are out of the shell and keep them on it ten days or two weeks and you will be amazed and delighted at their health and growth.

Nothing Can Cure Dead Chicks

Send \$1.00 today to E. J. Reefer, poultry expert, 4033 Poultry Building, Kansas City, Mo., for a package of Ready Relief, enough to save 500 chicks. Aren't your baby chicks worth five for a penny? Or, better yet, send \$2.35 on special Baby Chick Spring discount for three of the regular one dollar packages. You take no risk because a million dollar bank guarantees that if you are not satisfied your money will be returned on request. Send \$2.35 today. This will save you many a heartache.

Remember your chicks will probably die overnight if you don't protect them. They are as tender and sweet and delicate as day old human babies. Order this bank guaranteed Life Saver for Baby Chicks today and be ready when the little Baby Chicks break the shell. Send today sure for Reefer's Ready Relief, absolutely the world's greatest White Diarrhea Remedy. Or if you don't want to try this bank guaranteed Baby Chick saver now just ask Mr. Reefer to mail you absolutely free his valuable poultry book that tells the experience of a man who has made a fortune out of poultry, free.

Hatched 140 Chicks—Lost Only One

Mrs. T. E. Murphy, of Hughesville, Mo., writes: "I used your Ready Relief for White Diarrhea in my chicks and only lost one of 140." Here are more letters from a few of the hundreds who write me.

Poultry Raisers Write from All Over the U. S.

Ready Relief Saves Baby Chicks from Dying with White Diarrhea the Plague that Kills Millions of Baby Chicks Every Year.

Hatched 200—Raised Them All
My neighbors have lost lots of chicks. I had over 200 hatched and haven't lost a single one with White Diarrhea and I give Ready Relief the praise.—MRS. G. HANCOCK, Sturgis, Ky.

Raised 109 out of 111
The first week in July I had 111 chicks hatched. I used the Ready Relief Tablets and only lost 2 chicks out of the hatch.—NANCY BERRY, Brooksville, Ky.

Only Lost 1 out of 100
I have only lost one chick out of a hatch of 100 since using Ready Relief.—MRS. NETTIE KENNEDY, Joffa, Ill.

Never Lost a Chick
I used the box of Reefer's Ready Relief and never lost a chick.—MRS. FLORENCE FERGUSON, Indianapolis, Okla.

Ready Relief Stopped Loss
I got a box of Ready Relief. My chicks were dying 20 and 30 a day and now I don't lose any.—MRS. H. L. BUTTON, Ramona, Kansas.

Only Lost One of Incubator Hatch
Received the box of Ready Relief. My incubator just hatched and I only lost one chick with White Diarrhea.—MRS. O. F. GILLHAM, Central City, Neb.

Saved 260 Hatch
Received your tablets Friday and have been giving it to the 260 chicks. They were about a week old and was losing three or four a day, but this morning they seem all right, and lost none the last twenty-four hours.—F. WEIST, Talcottville, N. Y.

Not One Chick Lost
Have not lost a single chick since I began using Ready Relief.—MRS. J. B. COURSON, Cordova, Ala.

Hatched 117—Raised Them All
I have been using your White Diarrhea remedy on my last lot of little chicks. I hatched 117 chicks and have not lost a one. They are ten days old today, and not a weak one in the flock.—JOHN A. CLARK, Jonesboro, Ark.

Ready Relief Saved 90 Chicks
Your White Diarrhea cure for baby chicks saved ninety chickens for me.—MRS. J. H. WOODRUM, Fontaine, Mo.

Order Today

Send a dollar today for a full-size package of Reefer's Ready Relief. Or, better yet, send \$2.35 at special discount on three packages for a season's supply. Order now and be ready to save your baby chicks. Every one that dies lost you at least fifty cents. You run no risk. A Million-Dollar Bank will refund instantly if you are not entirely satisfied. [Whether you order "Ready Relief" now or not, mark on the coupon for Mr. Reefer to send you absolutely free his valuable poultry book that tells the experience of a man who has made a fortune out of poultry.] Act NOW. Pin a dollar bill to the coupon. But better by far, take advantage of the discount and send \$2.35 for three full-size \$1 packages. Send for this bank-guaranteed chick saver NOW. Today!

E. J. Reefer, Poultry Expert,
4033 Poultry Bldg., Kansas City, Mo.

Enclosed \$1.00 for one full-size package of "Ready Relief" ☐
and \$2.35 for three full-size \$1.00 packages of "Ready Relief" on special discount. ☐

(Mark X in the square opposite order you want.)

Send this with an absolute Bank Guarantee that you will refund my money if this is not satisfactory to me in every way.

Name

Address

Poultry Book FREE If you don't want to try chick saver at least put an X here for me to send you my poultry book FREE. ☐

A Little Girl's Big Business

By F. W. Jeter

POULTRY-CLUB successes know no north, no south, no east, nor west; neither do these successes belong to the boys alone. The "little women" have fully shown in their club work in raising and improving poultry that they can keep shoulder to shoulder with the best of the boys.

At this time it is a year's poultry experience of a little North Carolina girl I want to give to FARM AND FIRESIDE readers, and to show them a picture of the poultry outfit of one of her boy competitors.

The plucky, practical little poultry-woman in question is Mary E. Thigpen. She commenced her year's poultry business by taking over her father's poultry stock valued at \$800, and at the end of the year she had made a net profit of 50 per cent, or \$400.

Her \$800 poultry investment included houses, fixtures, one small incubator, brood coops, fencing, 100 bushels of feed, and 350 hens and breeding males. Her year's sales of eggs was \$432, and her stock of hens, pullets and breeding males at the end of the year had been increased to 500 fine birds. Besides, the family was supplied generously throughout the year. Her estimate that the eggs and poultry consumed by the large family and farm workers, together with the poultry manure turned over for farm use, was a fair equivalent for the farm-grown grain and sour milk fed, and was so considered by her father.

Her flock of old and young birds had a range of about eight acres—pasture and orchards, and after harvest they gleaned the grain fields and ranged at will.

Miss Thigpen, in order to build up better poultry stock, selected thirty of the most promising hens, which were mated to extra good, pure-bred males in a separate house and yard. As a result her present flock is markedly superior to the hens she had last year.

It is especially interesting to know that Miss Thigpen guaranteed every egg she sold to be fresh, clean, and of high quality in every respect. One of her best customers for eggs was a local hospital, which paid her five to ten cents per dozen above the country-store quotations. A portion of her eggs were sold to customers at a distance, shipped by parcel post.

This young poultry keeper found there were many "ups and downs" in her first year's experience. Hawks and other chicken enemies cut down her profit, and poultry diseases took some toll; but, on the whole, she overcame all difficulties after experiencing more or less severe losses. All told, her chick losses did not exceed five per cent.

Miss Thigpen did all the poultry work unaided, except a little help from a younger sister, and the cleaning and whitewashing of the houses, which work was done by hired help.

Leghorns and Rhode Island Reds are the stock Miss Thigpen is developing. The Reds she depends on mainly for fall and winter laying, then they go to the block, and the Leghorns make the big spring and summer drive for eggs. It is her unswerving purpose to add an average of two or three dozen eggs per hen to the output of her flock by scientific breeding under the supervision of her station poultry adviser, coupled with her own study and experimenting.

Pets That Are Profitable

By H. R. Holt

BRIEFLY outlining the rabbit industry, I will compare it with poultry, barring the fact that a rabbit does not lay eggs—except at Easter time. Yet we have the Leghorn of the rabbit family in the Belgian and New Zealand varieties. We also have the Brahmas, Orpingtons, and counterparts of other large poultry types in the Flemish rabbits and Checkered Giants. While I have heard many poultrymen compare the output of various varieties as to eggs, I also hear the rabbit breeders compare the output in meat of the Belgians, Giants, etc.

It is an undisputed fact that the Belgian and New Zealand types produce more meat in the course of the year than do the Giants; and, like our poultry friends, we also like to raise heavy producers and push the great big Flemish and Checkered Giants to a weight of anywhere from 11 to 18 pounds, and sometimes over, when matured.



I Want You to Make \$500 or More Extra This Year

YOU can do it. I'll help you. Mr. Thos. Ashley, Kimball, S. D., says that from his Old Trusty he sold \$350 worth of eggs, \$200 worth of pullets, \$200 worth of roosters, has 50 hens left and does not count what family used.

H. F. McDonald, of Manchester, Iowa, using one Old Trusty, says, "My poultry sales for 10 months are \$1084.00." Poultry raisers are making money this year. Send me your name and

Get My New Book FREE About Chickens

and let me put you on the road to a big poultry income. This book is more than a catalog. It's a poultry book filled with practical information—the kind that 99 out of 100 poultry raisers want. Size, 9 x 12 inches.

800,000 satisfied customers say that you are not trying out someone's experiment when you get Old Trusty. Handy home sizes—with or without metal cover. Write today.

HARRY JOHNSON, "Incubator Man"

M. M. JOHNSON COMPANY
CLAY CENTER, NEB.



We Pay Freight or Express on

Old Trusty

INCUBATORS and BROODERS

RAISE MORE CHICKS

Well Known Baby Chick Expert Tells How to Raise 98% of Each Hatch

If every poultry raiser would get a copy of Bessie B. Carswell's book on baby chicks (and she is sending out a limited number of free copies) they would have no trouble in raising practically every chick hatched. There is no excuse for the big losses that occur every year, as she shows how easy and simple it is to hatch strong chicks and how to prevent and treat white diarrhoea and other chick diseases that kill millions every year. By all means write Bessie B. Carswell, 680 Gateway Station, Kansas City, Mo., at once, and have her send you FREE her big 50c book before they are all gone.



BESSIE B. CARSWELL
THE POULTRY WOMAN

64 BREEDS Most Profitable chickens, ducks, geese and turkeys. Choice, pure-bred, hardy northern raised. Fowls, eggs, incubators at low prices. America's greatest poultry farm. 26 years in business. Valuable new 112 page Poultry Guide and Catalog free. Write today.

R. F. NEUBERT CO., Box 829, Mankato, Minn.

EGGS for hatching prepaid. Best varieties for laying and market. Free range stock. Catalog and guide free. W. SHAMPANORE, Box E, LITTLE SILVER, N. J.

THE LOWEST Priced Incubator Per Chick Hatched


This is proved by the "Successful" 26 year record. You want the "Successful" for a sure success this year.

Sell more eggs and chickens—help feed the world.

"SUCCESSFUL" INCUBATOR or BROODER

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Your Share in Reconstruction

(CONTINUED FROM PAGE 5)



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- 3 Corrects an acid condition of the mouth.
- 4 Retards the growth of decay germs.
- 5 Delights by its delicious flavor—a "medicine" taste does not necessarily mean efficiency).
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offices of the board. Get your soldier to write to the board. If he won't, or can't, or doesn't, write yourself, telling what you know about him.

Probably half the boys who have been permanently disabled in the war came from farms. They can't go back to their old work—you know that a farm is no place for a man who isn't physically fit. But there isn't any reason why, with training, nine tenths of them shouldn't get good jobs. Some of them may be refitted for farm work too. See that they get their chance.

The Government wants every disabled man to fit himself, by special training, to fill at least as useful and important a place as was his before he was disabled. It wants him to make himself ready to overcome the handicap of blindness or dismemberment or disease. The only way he can do that is through training. A crippled man can't stand on even terms with a whole one unless he knows more—unless he has better training. That's axiomatic.

Training has been provided, in addition to insurance and compensation. Every man who is entitled to compensation is entitled to training. And the Federal Board for Vocational Education stands ready to see that he gets it—if he wants it. There's the rub—if he wants it, if he will take it. It's an old simile, but I can't think of a better one—you can lead a horse to water, but you cannot make him drink.

There are no limits to the training a man can get. He may have to go to college, or law school, or an agricultural college, or to a school of medicine. He may need a course of three or four years. All right. He can have the course, no matter how long it takes or how much it costs. Or he can be put in a shop or a factory to learn a trade, and paid while he is learning. He may have been a farm laborer before the war, reading, as Lincoln did, borrowed books, dreaming, as Lincoln dreamed, of becoming a lawyer. And if he can show the vocational adviser that he has a mind good enough to study law, his tuition in a law school will be paid.

He will get for his living expenses, if he lives alone, at least \$65 a month. If his compensation doesn't amount to that, the Federal Board will make up the difference. His dependents, if he has any, will receive the allotments that went to them while he was on active service. If he's an officer, he'll receive the same monthly pay he got during his last month of active service; but if he's an officer he'll be expected to take care of his dependents out of his pay.

You may be disposed to say, offhand, that no man could need any persuasion to take advantage of such opportunities.

It isn't quite so simple. Suppose you were in hospital, a long way from home. Your family is waiting eagerly for your return. You'd have letters urging you to come as soon as you could, promising you love and care and rest and comfort. You'd be pretty tired, you know—one is, after a long spell of illness and confinement. You wouldn't feel much like making a new effort. You might very well feel that you'd done your share, and that it wasn't fair to ask you to start, just as soon as you were strong enough to be out, to learn a new trade or business or profession.

You might feel that it wasn't necessary. You might know that you could get a job, at higher wages than you ever got before, without taking any training at all. It might strike you as absurd to waste six months or a year, or more, studying, even while you were being paid two or three dollars a day, when, in spite of your disability, you knew of a job you could get that would pay you \$30 or \$35 a week.

That is where you come in. There is an answer—and a good one—to every one of those arguments against

vocational training for men disabled in war.

It isn't good for a man who might be able to take care of himself, if he made an effort, to turn that job over to anyone else, no matter how closely they are related to him. It saps his self-respect. And people who cheerfully and willingly and heartily assume the care of a disabled soldier in this spring of 1919 will be awfully tired of their burden, awfully impatient with its cause, before the spring of 1921, if human nature still runs true to form.

This is no time to mince words. What

Pershing's Wounded Aren't the Only Ones

IT AMAZES us, and we believe it will amaze you, to learn that almost two million wounded men are kept constantly on the scrap heap by accidents on the farms and in the factories of the United States.

And the best available records show (another amazing fact) that the agricultural accidents far outnumber the industrial accidents for the whole country. Come to think about it, we recall offhand two boys who were brought into our little home town in Nebraska with their arms chewed off by corn shredders.

Thanks be, the Government has awakened to an appreciation of the fact that these two million victims of peace deserve help and reconstruction as well as the quarter-million Americans who were wounded on the fields of France. A proposed law, called the Smith-Bankhead Bill, is now before Congress—and may be passed before this article reaches you—which provides for the extension of our reconstruction program to the reconstruction of our agricultural and industrial wounded.

The plan, under national, state, and county financing, is to take the man who gets hurt on your place and re-educate and re-equip him to earn his living just as he did before, teaching him at government expense the trade, profession, or business for which he is best fitted.

THE EDITOR.

did you call the man who, when the summons to war came, evaded it—the man who was physically fit and had no dependents? What did you call the man who let others do what he should have done? A slacker, didn't you? Well—what are you going to call the disabled man who rejects the chance to turn his disability into an asset, who prefers to let others do for him what he could do for himself?

But, heavens above, for one man who may have to be shamed into doing the right thing by that sort of talk there'll be a thousand who only need to see the case in its true light.

Of course their people want them to come home. Of course they are frantic to

be with those they love, to have a fuss made over them. They can go home, for a little while; they can have a furlough before they start their training. Often they can get their training so close to their homes that they can live at home. And even if the training does involve a further separation, how about the way they'll feel five, ten, fifteen years from now? What does a few months of absence mean compared with the comfort, the stability, the self-respect, they will get with their training?

If your soldier is facing the problem of accepting training, don't you think you ought to hesitate a long time before urging him to come home and let you look after him?

Suppose he can get a job at good wages just as he is? How long can he hold it? If he does hold it, will the wages stay at their present level? Pretty soon he will face the competition of the boys who are still in France. When they come home, strong and healthy, they'll want jobs too. The crippled soldier will be dreadfully handicapped then. He can meet them on even terms only if he has training. Sentiment, in the long run, doesn't count much in the matter of employment. The ancient law of supply and demand hasn't been repealed yet.

Those are all general arguments. When you come down to the specific case every general proposition in favor of vocational training splits up into a hundred, each as powerful as the argument it springs from.

The Federal Board for Vocational Education wasn't created to take care of men disabled in the war. Its function, when it was first set up by Congress in 1917—although we were in the war then—was simply to direct and aid vocational education among the States. It had some money to spend in research; it could give federal aid to state systems of vocational education. The idea was to bring technical, vocational training up to the high level of ordinary education in America.

But the board, under the extremely able direction of Dr. C. A. Prosser, was recognized as an ideal instrument for dealing with the military and naval victims of the war. And so, under the Smith-Sears Bill, which became a law on June 27, 1918, its functions were extended to include its present work. It has two million dollars to spend for soldiers and sailors, and can get more when it needs it. I can't say too often that there are no limits to the money Congress is prepared to spend to restore disabled soldiers and sailors to the ranks of self-supporting, independent workers. You might say Congress is willing to invest millions in those men; it isn't willing to insult them by giving them one penny.

Now representatives of the board are busy in the great reconstruction hospitals, making preliminary investigations of men about to be discharged. Sometimes it proves comparatively easy to place a man in a good job; training isn't always needed. The board acts as an employment agency to a considerable extent. But its great task is to seek out the men who have to be re-educated, or who, never having had the opportunity to secure an education, can take advantage of this chance.

Before a man is sent to be trained the board knows all about him. His physical condition is carefully examined. He is studied by experts, just as you study your live stock. His natural inclinations are considered. If nature designed him to be a machinist and he has a wild desire to be a sculptor, diplomacy is employed to lead him into the path he ought to follow.

If he has any chance at all to make good at the sort of work he wants to do he is trained for that work.

We haven't, Heaven be praised, as many disabled boys to train as there was [CON-

THE EDITOR.

How You Can Help the Boys Along

THE Federal Board for Vocational Education wants to give every disabled soldier and sailor a chance to fit himself for his future life on an independent, self-supporting basis. It tries to reach every man before he has been discharged from the reconstruction hospitals. But sometimes men get away, and sometimes, after they're gone home, they find that they can't get along as well as they thought they could. If you know such a man, get him to write, or write yourself, to the nearest district office of the Federal Board for Vocational Education. Here is a list of the addresses:

- District 1—Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Room 433 Tremont Building, Boston, Mass.
- District 2—Connecticut, New York, New Jersey, Rooms 711-712, 280 Broadway, New York City.
- District 3—Pennsylvania, Delaware, 1000 Penn Square Building, Philadelphia, Pa.
- District 4—District of Columbia, Maryland, Virginia, West Virginia, 606 F Street N. W., Washington, D. C.
- District 5—North Carolina, South Carolina, Georgia, Florida, Tennessee, 1404 Candler Building, Atlanta, Ga.
- District 6—Alabama, Mississippi, Louisiana, 822 Maison Blanche Annex, New Orleans, La.
- District 7—Ohio, Indiana, Kentucky, 906 Mercantile Library Building, Cincinnati, Ohio.
- District 8—Michigan, Illinois, Wisconsin, 110 South Dearborn Street, Chicago, Ill.
- District 9—Iowa, Nebraska, Kansas, Missouri, 517 Chemical Building, St. Louis, Mo.
- District 10—Minnesota, North Dakota, South Dakota, Metropolitan Bank Building, Minneapolis, Minn.
- District 11—Wyoming, Colorado, New Mexico, Utah, 909 Seventeenth Street, Denver, Colo.
- District 12—California, Nevada, Arizona, San Francisco, Cal.
- District 13—Montana, Idaho, Oregon, Washington, Seattle, Wash.
- District 14—Arkansas, Oklahoma, Texas, Dallas, Tex.
- Any Red Cross Home Service Section anywhere.

TINUED ON PAGE 51

Musterole— for Colds and Congestions

Remember the time when you had that dreadful congestion of the lungs—and Grandma slapped a stinging, messy mustard plaster on your chest? How you writhed and tossed and begged Grandma to "take it off"?

That was many years ago. Now, Grandma gets the jar of Musterole, for now she knows Musterole is better than a mustard plaster.

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You just rub it on your throat or chest. It penetrates way down under the skin and generates its own peculiar heat which soon loosens up the cough and disperses congestion.

Strangely enough, it does not feel warm after the first momentary glow and tingle, but is delightfully cool and soothing.

Try it for croup, bronchitis, coughs, colds (it often prevents pneumonia), headache, neuralgia, stiff neck, rheumatism or lumbago.

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every reason, last summer, to expect. But we have enough—oh, we have enough! The best estimate of the number of cases likely to require re-education, vocational training of some sort, isn't more than fifty thousand.

It wouldn't matter if there were ten times as many. They would be cared for. That is known. It isn't a guess or a wild statement. So far as those men are concerned, their sufferings, their wounds, their disabilities, will yield them a rich dividend.

Then through what is to be done for them we may find one way of doing the thing that, in some way, must be done. That is to make this war pay for itself, terrible though its cost has been. For in this, as in many other things, the war wiped out a phrase that has long stood in the way of progress—"It can't be done." This work that is being done for the disabled soldiers and sailors is a beacon, a torch to point the way.

This we have done and are planning to do for perhaps fifty thousand of our men who fell victims to war. But every year, in peace, another army fights under our flag—the army of industry and of agriculture. It has its casualty lists too, although the papers never print them. Here we have only just come to the beginning of getting statistics, reliable figures. But, as nearly as they can be reckoned, in industry—in factories, in mines, on railroads—two hundred and twenty thousand workers every year are so greatly disabled as the result of accident that they cannot go on with their work.

OF AGRICULTURAL accidents, of the victims of corn shredders, of all the complicated agricultural machinery now in use, of kicks from horses, of all the innumerable accidents that do occur on farms, we have no proper records at all. But in Germany, where such figures have long been gathered, the last reports bore witness to the fact that there were twice as many victims of agricultural as of industrial accidents.

We have workmen's compensation laws which provide some measure of relief for these victims. But it is a drop in the bucket beside their needs. I want to repeat that the figures are estimated and cannot be vouched for; but, on the word of men who know the facts if any men do, there are alive, every year, two million crippled or disabled workers debarred from the work by which, before their accidents, they supported themselves.

You would have said, not so long ago, that these figures were frightful, but that beyond charitable aid nothing could be done. Knowing what you do of the work of the Federal Board with the soldiers and sailors, will you say that to-day?

Congress, as I write, is hearing, in its committees, the arguments for the Smith-Bankhead Bill. This bill extends to the victims of industrial and agricultural accidents the work of the Federal Board for Vocational Education. If the bill passes, the board will have, for distribution among the States, \$500,000 in the first year, \$750,000 in the second, and thereafter \$1,000,000 each year. The States must spend dollar for dollar to receive this money, and their local boards for vocational education must work with the Federal Board, and have its approval and sanction, which is the rule regarding the spending of the federal money voted in aid of ordinary vocational education.

We met the demand the war made upon our understanding, our sympathy, our help for the men it crippled. If the Smith-Bankhead Bill is passed we shall make a beginning in a task far greater. We shall be rescuing then, restoring to the ranks of the industrial army, the great army of the farms, those who, in the line of duty, have incurred wounds or disease that forced them to fall out of the ranks.

It will pay, you know—it will pay in dollars and cents, as well as in lives and relief from suffering, physical and mental. In the long run, which will cost you most, to pay your share of maintaining a cripple for a year or two, while he learns to support himself, or to have him become a charge upon you for the rest of his life?

IF YOU want to know the real truth about the world wheat situation as it affects your planting this spring, read Walter E. Weyl's "What About \$2.26 Wheat?" in the April issue.

"THE Four Secrets of My Farm Success," in the April number, is Jephtha Crouch's own story of what he has learned that will help you to better things.



Multiplexing the Telephone

Marvel has followed marvel since Alexander Graham Bell invented his first simple telephone, the forerunner of the millions in use today.

In these last four decades thousands of Bell engineers have developed a system of telephonic communication, so highly perfected that the same crude instrument which at the beginning could hardly carry speech from one room to another can now actually be heard across the continent. This is because of the many inventions and discoveries which have been applied to intervening switchboard, circuits and other transmitting mechanism.

The vision of the engineers has foreseen requirements for increased communication, and step by step the structure of the art has been advanced—each ad-

vance utilizing all previous accomplishments.

No one step in advance, since the original invention, is of greater importance, perhaps, than that which has provided the multiplex system, by which five telephone conversations are carried on today simultaneously over one toll line circuit, or by which forty telegraphic messages can be sent over the one pair of wires. As in a composite photograph the pictures are combined, so the several voice waves mingle on the circuit to be again separated for their various destinations.

By this wonderful development the Bell System obtains for the public a multiplied usefulness from its long distance plant and can more speedily and completely meet the needs of a nation of telephone users.



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I will help you to get a start. I will work with you, co-operate with you and help you to build a business of your own, which will assure you a living income and independence. Isn't it worth a letter or a postcard to you to investigate? Address

SALES MANAGER

FARM AND FIRESIDE

SPRINGFIELD, OHIO

My Solution of the Farm-Boy Problem

[CONTINUED FROM PAGE 13]

to see the boy hustle. He knew that he was in his own place again, and I was glad that he was. This brought about sooner or later complete frankness on his part, giving me, many a time, a better chance to help him. Anyone can handle a boy that way, if he works carefully.

Sudden explosions of temper and open defiance in boys are due to a definite cause. At first they had been quite frequent among mine, and I was at a loss to understand. Suddenly it dawned on me. Making a beeline for the kitchen I had a word with my chef, "William the Conqueror," so called because he could cook in English, French, Italian, Russian, and many other languages not known on earth. Accusing me of "figitis"—his term for worry—he finally acknowledged that he had been using an excessive amount of sugar in his dishes.

Now, sugar in moderate quantities is a splendid thing to develop energy of muscle. I used to give it to lads who were delicate, to build up their systems. But in large amounts it upsets digestion and raises hob. It makes too much carbon in their blood.

I opened my "home efficiency" book, which gave in full the daily record of work, signs of progress, faults, and advancement. There is bold-faced type—"Candy sent to the boys four times in one week, three times in another." To prove my point, that night I gave the boys a treat—candy. The next day there were two fights and general bedlam. No time to work it out

the doorway—for this was their own private sanctum—the first thing that caught the eye was several large tables which had been built by the boys under my supervision. These supported extended flats filled with soils. One represented the United States, another South America, and so on. Each was laid out in sections showing the different States. These were planted with the various products which thrived best in that locality. California showed citrus groves and grapes. Kansas wheat or alfalfa; or New York and New Jersey, apple trees and vegetables. Each State exhibited its agricultural possibilities. Across the small-scale continent various prominent railroads ran, say from San Francisco to New York, to Boston or again to the South. Large cities were indicated by different colored thumb tack.

One lad was president; a second, superintendent; while a third was traffic manager. The others took turns in handling the trains of box and flats loaded with food. One or two changed about as purchasing and selling agents. Twice a week the yells and howls simply meant that the produce exchange was open and that they were learning the business game.

The sales were made direct from the farmer to consumer. In this way they learned railroading, the proper way to transport food, the parcel-post laws, and every other phase of the money-making end. Physical geography on the tap! Farm needs, the best kind of machinery to buy the most profitable markets, were all

Prize Contest Announcement

"My Secret"

WHEN we were a reporter on a certain paper in the Middle West, we searched for two years for the son of a prominent citizen who had disappeared just after graduating from college with high honors. We found him, but we never told anyone where, and his father and mother both died believing he would some day come back. We doubt that he ever will, though he could.

That is our secret. Way down deep in your heart somewhere you have a secret too—something you never have told to anyone. Not necessarily something with a lot of trouble attached, but a secret. There is something fascinating about the very word, and if you can tell yours in such a way that no one will suspect you as the teller, or will be harmed by the telling, you may get the \$15, \$10, or \$5 we have for the three most interestingly told secrets. All letters must reach us not later than March 25th.

Keep within 500 words. Address Contest Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York, and don't expect your letter back if it isn't used. We cannot return them. Awards and letters will be printed in June.

of their system! Later I tried the same experiment on two little chaps who were not very lively.

They were model youngsters with not much imagination. All I can say is that these angels set fire to a haystack, "just to see the thing burn." And I paid for the candy! These affairs borne on a gale of boyish wind usually happened when the outdoor labors had diminished.

There is only one time to use the word "don't" with a boy. Never find fault or criticize him before others. It hurts his pride and develops a feeling of temporary hatred.

And don't make them do the same thing too long at a time. It is common practice to rotate crops to get as fine a yield out of the soil as possible. You have to rotate boys too. His mind muscles need a change. So I rotated my boys, even though the work lagged a bit. One was sent on an errand, another to clean up a woodpile. Their minds were thus put in fresh soil. And when they returned to their old jobs they were twice as ready to work as before. This may seem a lack of system, but it was merely applying grease to their axles.

"But this is not business," I hear you say. "I would lose time and money." Not at all. You get more real work out of them in the long run. And the boy will work harder and be more apt to stay at the old farm when you need him most.

Then there is the matter of business training. A period of two hours was given the boys to develop their common sense and business training. Looking in through

"played with." It became a natural habit. Freely and almost without thought they developed judgment, shrewdness, a knowledge of forestry, and everything which an up-to-date man requires to make a successful farmer.

Any farm family or group of families can start a thing like this. Indirectly it creates a big love of America.

A weekly report was submitted by each boy on what he had done in "business." Generally every boy was a millionaire! If any cheating took place the cheater was ruled out for a week.

Don't worry about the noise. Noise is merely the sign of enthusiasm and interest. It is the boy's spiritual dynamite blowing up his mental boulders and rocks, turning his subsoils to the sun.

And now for the day-dreamers. I remember one sturdy, energetic, blue-eyed lad. Among the rows of tasseled corn he stood, leaning on his hoe. His glance was turned far off toward the western sky. Dreaming of cowboys, dreaming of aeroplanes, his good eye fixed on France, and half of his bad eye on his work. He would return to the cornhills and weeds later on. So with them all, when the dreaming mood came silently, quickly, a harsh word or order to get busy would have been brutal. It rarely lasted for any length of time. A slight hint, "Well, son, have you been to the big battle, or were you sent back?" recalled him to his duty.

Perhaps by trying out a few of these ideas, a father here, a farmer there, may be able to keep a grip on his son.

Have We Produced Too Much Food?

THE answer is no. Our February issue, advocating heavy food production by the American farmer during the next five years, came out just about the time Herbert Hoover cabled his statement from Paris that we faced "a serious problem" in the disposal of our enormous food supplies, particularly fats. Offhand, it would appear from what we said in our February issue that we were barking up the wrong tree. As a matter of fact, we stand by every word Wolff wrote in his article. And we stand by every word Hoover put in his statement.

There is a world shortage of food. There is a market for what America can produce in the next five years. Nevertheless, we do face "a serious problem" in the disposal of our enormous food supplies, for the moment.

What Hoover said was that during the armistice, while the blockade of the Central Powers is still on, with shipping tied up as a result, and with provisioning of northern Europe still in the hands of the allied powers, whose buyers control food prices in the world markets, those powers want to draw their supplies from cheaper and nearer sources than America. To quote:

"The armistice came suddenly, freeing shipping from military use and reopening to the Allies the cheaper Southern Hemisphere and the colonial markets, where, in addition, they could have more liberal credits and markets for their manufactures."

But he adds:

"If an early peace is signed, and the markets of Europe are opened freely to trade, there will be a greater demand for food from the new mouths than even this surplus could supply. But in the period between the armistice and peace we have a very difficult situation."

Meaning that there are plenty of customers for our food, but that the blockade, which continues during the armistice and until peace is signed, makes it impossible for us to get at them.

We are in the position of a restaurant keeper who, with plenty of food on his tables, and with plenty of hungry customers standing outside the doors, discovers that all the doors have been locked and the keys thrown away.

Who is going to unlock the door to world markets for America's food? Hoover puts it this way:

"The real solution lies in the hope of early peace" [which will end the blockade], "and in the meantime the steady demobilization and the removal of all restrictions on free marketing of surplus foods, except in enemy territory, thus re-establishing the law of supply and demand."

Restrictions on American food exports have been removed. The line is clear for our products from the farm to the seaboard. But government buying combines in European allied countries still control prices, still keep business men on both sides of the ocean from doing business unhindered together. And the blockade shuts off other channels of trade, thus bottling up our supplies here at home.

It is pretty much up to the allied Governments to clear away these hindrances and let us at our markets. Keeping us from them is a serious embarrassment, even if it is temporary.

So, it is not a question of overproduction, but a question of marketing, that we face. Hoover proved that when he said:

"By May, if we have peace and freedom, any surplus that accumulates now will be turned into another world shortage of fats. Indeed, if the entire consuming population of the world were able to obtain fats to-day, there would be a shortage at this moment, even with our great surplus production."

So, this is not a question for the American farmer. He has done his share. He has produced the food. It is the problem of the Allies, who control the world markets for that food; and of Mr. Hoover, who is World Food Director for those Allies; and of the American Congress, whose duty it is to see that the farmer does not lose by what he has patriotically done—it is *their* duty to dredge channels to world markets for the food which was here produced and is there wanted.

Let us insist on this!

All right.

If we haven't produced too much food, you ask, what about the millions of bushels of

\$2.26 wheat that we will produce between now and the spring of 1920, much of which, the wiseacres tell us, cannot be stored, nor milled nor marketed, because of the overproduction, but which the Government is obligated to pay for just the same?

Wheat is a chapter by itself, and the lead article in our April issue is the first clear statement of the world wheat situation, as it affects the American farmer, that we have ever seen. It is written by Walter E. Weyl, and it says, among other things, just what we have said here:

That the farmer has produced wheat at the request of the Government, to fill a world shortage. That his wheat production is in itself an earnest of his good faith, and that he must not lose by it. Weyl believes, and we earnestly hope, that the Government will pay the farmer his price and take upon itself the burden of getting the market value out of the wheat.

However, so far as wheat is concerned, the sagest counsel now seems to be that if you had planned to plant wheat this spring, and can conveniently plant something else, to do it. It is up to you individually. If it is going to cripple you too much financially *not* to plant wheat, then plant wheat. If it isn't, plant something else. But whatever you do, read Weyl's article.

THE EDITOR.

Remember the Moth

By Lulu Tregoning

DO YOU expect to use the same hat and coat next year that you have been wearing this winter? Of course we don't expect prices to soar any higher, but they may retain their present height—in which case few of us can afford many new furbelows.

All of which is preliminary to advising a careful packing away of furs and woolen clothing for the summer months. Save every hat bag and paper bag possible, as these are most convenient things to pack furs and woolens in because the tops can be tied securely so that moths cannot get in.

Before packing, furs and woolens should be hung on the clothesline for a whole day—a bright, dry, sunshiny day. Brush and shake the furs, and be sure there are no grease spots on the woolens, for it is on these spots that moths live best.

After everything has been cleaned, brushed, and well aired, pack in hat sacks and tie securely; or, if you would be even more sure, sew red pepper in cheesecloth bags and place them between furs in the paper bags. If packing woolens, place the pepper bags between the folds.

Another excellent way to pack winter things is to wrap them securely in newspapers, and fasten the ends together with tape or passepartout, making the bundle air-tight. The printer's ink on newspapers is a moth preventive because of its odor, so no other is needed.

Moths do not like the odor of cedar, and will not bother a cedar chest. One can also purchase cedar chips at any furniture store, and pack them with the woolens and furs.

A tried and true enemy of moths is the mothball. Its odor, however, which is difficult to get rid of on taking things from summer storage, argues against its use.

Some Hints for Dinner

VEAL LOAF—Three pounds veal, one-half pound salt pork, two eggs, butter the size of an egg, one tablespoon salt, one teaspoon pepper, three crackers rolled fine. Put the veal and salt pork through the meat grinder. Mix well together. Shape in an oblong loaf and cook in a medium oven. Baste often. Serve cold.

HAM CROQUETTES—Chop or grind fine one-fourth pound ham; mix with it an equal amount of mashed potatoes, two chopped hard-boiled eggs, one tablespoon minced parsley, salt and pepper to taste, and the yolk of one egg. Shape into croquettes, and fry brown.

POTATO PUFFS—Two cups mashed potato, two eggs, one-half cup milk, one teaspoon salt, one cup grated cheese. Add the milk to the potato and beat until thoroughly blended. Add the beaten egg and salt, gradually adding the grated cheese. Bake in buttered tins or ramekins in a slow oven.



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Mrs. Cornelius Vanderbilt and Mrs. Perry Belmont, not on speaking terms, met at a reception wearing identical gowns. They both smiled.

MANY of the women leaders of official society in Washington are models of dignity, distinction, and suitability in their dress. True, most of them do not possess the magnificent jewels which some of the official hostesses of former administrations affected, nor do they, as a rule, go in for enormously elaborate or expensive wardrobes; but, on the whole, they are always handsomely and appropriately gowned, with due attention to prevailing modes and tendencies. And it is a credit to their intelligence and capability that they are able to accomplish this without undue extravagance in either time or money.

Any woman desirous of learning something of the art of dressing well without extravagance can profit by keeping an eye on the women in official life and taking note of the ways and means by which they achieve distinction. Despite the fact that the "fierce light which beats upon a throne" is reflected upon her, Mrs. Woodrow Wilson, the President's wife, does not hesitate to practice certain little economies in dress.

In deference to her position it is incumbent upon Mrs. Wilson to be handsomely gowned, and to have a more complete wardrobe than a woman less conspicuous would need. But certain concessions she can and does make, even as you and I. For instance, she has her gown remodeled when occasion offers, and not infrequently makes one costume do for two seasons. One in particular comes to mind, a rather severe black velvet gown which in its second incarnation was changed almost beyond recognition by the addition of flowing sleeves of American Beauty tulle. One side of the draped bodice was also fashioned of the tulle.

Mrs. Wilson's clothes lend themselves to being "made over" because the models are never extreme, and are always of the handiest and best materials. Good material is good economy. Another economy of Mrs. Wilson's, without sacrificing the dignity and completeness of her wardrobe, is that this season she has one very beautiful hat designed to wear with two afternoon gowns.

One costume, which she wore for the first time at the marriage of Miss Lucy Kyle Burleson, daughter of the Postmaster-General and Mrs. Albert Sidney Burleson, and Ensign Charles Greene Grimes, U. S. N., is gray—a soft heavy gray satin, made with a panel back and front which is so becoming to Mrs. Wilson's type. The skirt clears the ground by several inches, and is moderately full. The bodice hugs the figure rather snugly, and there are long sleeves of the satin, and a narrow collar of moleskin finishes the gown becomingly at the throat. The panel trimming is of georgette crêpe, heavily embroidered in self-colored floss.

The other costume is of black georgette crêpe built over satin and made seasonable by the liberal use of broadtail put on in vertical bands to give the effect of long lines, with a broad strip of the fur about the bottom of the skirt. The hat which Mrs. Wilson wears with both these gowns is a picture hat of black velvet, becomingly rolled on one side, and trimmed with a

band of gray velvet about the crown and two large upstanding gray ostrich feathers at the front of the crown.

Mrs. Wilson's afternoon gowns are always particularly well selected, and she has need of a good many, for she frequently attends the wedding of some one of the household of a member of the President's official family, or is present at a benefit for some charity in which she is personally interested. And always she is correctly gowned. Moreover, she is exceedingly fond of music, rarely misses a symphony concert or a recital by a noted artist, and almost always she has in her box a little company of guests made up of the wife of a foreign ambassador or minister, the wife of a cabinet officer, and two or three other ladies prominent in official or resident society.

For example, at the first concert of the series to be given by the Philadelphia Symphony Orchestra, for which she is a box holder, she had with her Mme. Jusseland, wife of the French ambassador, Mrs. Robert Lansing, Mrs. Frank L. Polk, Mrs. Herbert Hoover, and Mrs. Harry Garfield. On this occasion Mrs. Wilson kept her coat on, as the theater was chilly, and looked very pretty with the big seal collar of her wrap drawn up about her ears and wearing a black tricorn hat with an upstanding feather ornament in front.

One thing is distinctly noticeable about Mrs. Wilson's evening gowns, and about the evening gowns worn by the President's daughters, Mrs. William Gibbs McAdoo and Miss Margaret Wilson, as well—they all have trains. This is partly due, probably, to the fact that trained gowns are becoming to them all; but undoubtedly they are also actuated in their selection by a sense of the fitness of things. A train lends dignity and formality to an evening gown. Any function at which the President's wife is present needs must be somewhat official and formal in character; therefore she wears a train. And Miss Wilson and Mrs. McAdoo take their cue from the First Lady.

Of course, in this democratic country, "court etiquette," which decrees the exact length of the train to be worn by matrons and young girls at court functions, is an unknown quantity; but one who would be strictly correct wears a trained gown to a White House reception, or, indeed, to any function at which the President is to be present. Moreover, from present indication it appears that trains, real honest-to-goodness trains, cut in one with the gown and not tacked on as an afterthought, are "in again."

This was made evident at the first important function of the season, the brilliant reception given at the Italian embassy in celebration of the birthday of the King of Italy, which, by happy chance, fell upon the day the armistice with Germany was signed, and developed into an international jubilation—a ready-made official celebration of the lifting of the war cloud from the world. This was an event which will be writ large in Washington's social history, for everyone of consequence in the official and diplomatic world was present, and the President of the United

How Mrs. Wilson Saves on Clothes

By Ruth Eleanor Jones

Illustrations by M. B. Farthing

States disregarded the unwritten law which forbids his setting foot on foreign soil—and an embassy is technically foreign soil—and paid a signal honor to Italy's king and to the Italian ambassador and Countess di Cellere by attending the reception.

Mrs. Wilson was with him, of course. They stayed for over an hour, mingling quite informally with the guests, supping with their hosts at a small table.

Uniforms and decorations were in order at a function of this character, and every woman present wore her newest and handsomest frock, so it was an excellent opportunity to get a line on the new modes of the season. The most striking single feature was the number of brocade gowns. Mrs. Wilson wore a lovely black and silver brocade, made on long close lines, with the new pointed train and with a garniture of silver lace. Miss Mabel Boardman also had on a black and silver gown, a very heavy brocade which had a high metallic luster and was entirely guiltless of trimming. Mrs. Marshall Field's costume was of sapphire-blue tissue brocade in silver, and the Countess di Cellere was gowned in white and gold brocade, trimmed with sable and rare Italian lace.

For the first time since the beginning of the war the countess wore splendid jewels, a tiara of diamonds and a necklace and corsage ornaments of diamonds and rubies. Magnificent diamonds were worn by many of the women present, and this in itself was significant of the discriminating taste which governs the matter of "dressing to the occasion" in Washington. While the world was at war it was not considered good form to wear jewels, but at this very first official celebration of the war's end the women wore the most splendid gems their jewel cases afforded.

Mrs. Askel C. P. Wichfeld, who was Miss Mabelle Swift of Chicago, and at the time of her marriage to Mr. Wichfeld, an attaché of the Danish legation, the widow of Mr. Clarence Moore, was one of the most strikingly gowned

There wasn't an inch of trimming on the costume.

No tale of what women are wearing in Washington is complete without some mention of two or three sartorial tragedies which have gone down to history. Perhaps the most striking instance of this sort occurred the winter that Mrs. Wilson became chatelaine of the White House. Among the gowns in her trousseau was a lovely white and silver brocade costume, a gown made on faultless lines and exceedingly becoming. She wore it at one of the White House receptions, and must have been rather shocked to see Mrs. Mahlon Pitney, wife of Mr. Justice Pitney of the Supreme Court, coming toward her wearing the exact duplicate. To make matters worse, there was another gown exactly similar, except that it was brocade in silver instead of white.

Fortunately, all three women were blessed with a sense of humor, and were able to laugh over their predicament. Mrs. Cornelius Vanderbilt and Mrs. Perry Belmont—two women who were not on speaking terms with each other—met face to face in Mrs. Richard Townsend's drawing-room once, wearing identical gowns. They had to laugh, too.

A vivid memory persists also of the occasion when Mrs. Peter Golet Gerry, wife of the senator from Rhode Island, who had been a leader in Washington society from the days when she was Miss Mathilde Townsend, arrived at a ball arrayed in a very beautiful new Paris frock, to find its counterpart adorning a handsome stranger.

Mrs. McAdoo, daughter of the President and wife of the ex-Secretary of the Treasury, was perhaps the best-dressed woman of the

Mrs. Wilson's combination hat



cabinet circle, who is particularly interesting, as she buys all of her clothes ready-made. Moreover, she puts a limit on the amount she will pay for any one gown, well on the right side of extravagance. She does much of her buying in Washington, and more in Baltimore, and says frankly that she avoids having her

Society Women Have Their Troubles, Too

DON'T think just because the newspapers brand this woman or that a "social leader" that she is authorized thereby to snap her finger at expenses. No matter how high her "position," she has to sit down quietly once in a while and figure out where the money is coming from and how she is going to dispose of it to the best advantage to do that "leading." Also, let us whisper in your ear—some of the social lights you hear a lot about haven't as much money for their clothes as the wives of some successful farmers.

THE EDITOR.

women at the reception. Her costume was practical as well as beautiful, although few women have Mrs. Wichfeld's beautiful jewels, a chain of great diamonds falling nearly to the waist line and supporting a huge pear-shaped diamond pendant, pear-shaped diamond earrings, and diamond pins for the hair, to set it off. The gown was of black velvet, severely plain. The skirt was short and made with a pointed overskirt that was full enough to give a noticeable variation from the slim silhouette now in vogue. The bodice was quite high in the back, just leaving the nape of the neck bare, the décolletage was cut square in front and the narrow kimono sleeves just turned the curve of the shoulder.

gowns made to order as an economy of time. She is a slim, girlish person, who can step into a "thirty-six" without alteration. Having lovely Irish blue eyes and understanding full well the value of dressing to match them, Mrs. McAdoo affects blue a good deal. She nearly always has a blue evening gown in her wardrobe. This year she is wearing a smart navy blue tailored suit, rather plain, and she has two hats which she wears alternately with this costume. One is a bright French blue and the other a little turban of wooly gray beaver, with a modified tam-o-shanter crown and no trimming.

Miss Margaret Wilson shares with Mrs. McAdoo the faculty [CONTINUED ON PAGE 55]

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2 ROSEMARY—A rose as beautiful and dainty as its name. Yet it's as hardy as an oak and grows vigorously everywhere. The flowers are the most delightful shade of silvery pink imaginable and perfectly double. The petals are thick and heavy, giving the bloom an appearance similar to a Camellia. This rose should have a home in every garden as it is one of the most liberal bloomers under cultivation, one that can be relied upon for a mass of exquisite buds and flowers from early spring until late fall.

3 MILADY—Without this valuable new hardy everblooming red rose the choicest collection is incomplete. In habit of growth, color and form of flowers it is perfection. The flowers are a bright, rich, scarlet crimson, opening slowly from long pointed buds to perfect full double roses. The buds are superb in form and when in full bloom resemble the famous old General Jack which everybody admires. This rose is a strong, sturdy grower and its heavy, leathery, deep green foliage is so profuse as to make a beautiful background for the mass of magnificent flowers. Once one

inhales the delicate fragrance of this rose it will never be forgotten.

4 MARIGOLD—A peerless rose in every respect. It is distinct in habit of growth, thriving under very adverse conditions and rapidly forming a beautifully shaped plant in one season. It is an exceedingly healthy variety, blooming continuously throughout the entire season, having the vitality necessary to produce flowers in the greatest profusion. One cannot conceive of the wonderful beauty and splendor of the deep, full flowers which are of a clear saffron yellow, opening out to a canary with dark golden shadings, borne on good stiff stems. The buds are large and elegantly formed of large heavy petals. This rose has a most delightful fragrance.

5 KILLARNEY QUEEN—Wonderful improvements over the well-known Killarney have given us this perfect new one, Killarney Queen. Flowers are impressive in size and very double. Of fine, lasting texture and of a rich dark shade of pink, the Killarney Queen is dazzling in its purity and brilliancy of color. It is remarkably hardy and a rapid, vigorous grower, blooming the entire season through.

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Why Have Backward Children

By Helen Johnson Keyes

THIS is an age of hope—of hope built upon the surest foundation, *knowledge*. No longer are all backward children destined to remain backward, to grow up stupid, useless, and discontented. Science has sought for and found what are often the causes of this dullness, while doctors, teachers, and philanthropists are using the knowledge and applying the cures.

There are children, it is true, who can never be made normal, because their nerve cells are lacking in actual tissue, which we do not know how to supply. The problem of their care is of very great importance, but it is not the subject of this article. The boys and girls of whom I am writing are dull because of conditions which may be overcome either entirely or in part.

Perhaps this kind of pupil makes up three per cent of your district or consolidated school. They are very unhappy because the brighter pupils make fun of them; they worry the teacher because it is impossible to keep them up to grade; and their parents are mortified and, possibly, impatient.

What shall we do about it?

In the very first place, let us get up in our community a parent-teacher organization, a club with a membership of mothers and fathers whose children are in the school, of the teacher or teachers, and of the local doctors and dentist. Working together, parents, teachers, and doctors should make out a program which will secure for these children special treatment and a special education capable of making them normal eventually.

Although I have mentioned the doctor last, it is to him that parents and teachers must turn first for help. Before the spiritual influences of home or the educational assistance of school can be of the slightest use in developing the backward child, the physician must remove those physical defects which are the causes of backwardness.

It will usually be found that dull children are suffering either from defects of sight, hearing, or breathing; from decayed teeth, or from deformities such as curvature of the spine (which is exceedingly common in school children), hip disease, or "pigeon breast," or from undernourishment.

It is easy to understand that a child whose eyes are so formed that the rays of light do not focus at the right point on the retina, but, instead, spread out too soon or not soon enough, giving a confusion of blurred images instead of one clear picture—it is easy to understand that this child will be dull. It is impossible for him to see quickly what is on the blackboard or on the page. But the eye has an astonishing power to strain itself and get the correct vision finally by tremendous muscular effort, and the defective sight is often overlooked. The effort, however, occupies time, injures the eyes, and fatigues the whole mind and body.

Why Some Children Appear Dull

In a similar way, the child who does not hear clearly appears dull, even though his brain is all right, because he simply does not know what has been said.

The child whose breathing passages are plugged up by overgrown tonsils and adenoids, or by spurs of bone in the nose, or by a crooked middle partition of the nostrils, fails to get the amount of oxygen which the body must have if the brain is to work normally. He is dull because the valve is shut through which the fuel for his brain should pour in. His mind may be an excellent engine, but it cannot work without oxygen power.

Decayed teeth are painful, and pain distracts attention from everything else. Besides this, the decaying spots are breeding grounds for poisonous germs and acids which pass into the digestive tract, bringing about chronic stomach and bowel trouble. It is plain why children with aching and decaying teeth should be dull at school.

Children who are improperly fed, and those who, although given nourishing things to eat, have bodies which are not able to digest and distribute this food through the body mechanism, are of course backward. Eye-strain, bad breathing, decayed teeth, and pressure occasioned by deformed bones may all lead to this condition of digestive insufficiency and brain starvation.

The remedies for these conditions are well known. They require good doctors

and good after-care, but there is not alarming about them. I trust that a time will come soon when county hospitals provide proper working places for doctors and skilled care at low prices for patients, but even without them it is usually possible for parents to take their children to a competent eye doctor for glasses, to a throat and throat specialist for defects of hearing and breathing, to a surgeon for deformities, to a family doctor for advice as to diet and to a dentist for the filling of teeth. This sounds rather formidable, but of course one child is not likely to be in need of all these cures.

The Part Each Should Play

It is the part of the physicians in parent-teacher organization to examine children at fair prices and with utmost care the children who are brought to them, and, furthermore, to watch the children of the community in school and at play and to recommend to mothers, fathers, and teachers medical examinations and treatment suggest themselves to their trained judgment and intelligences. Better still would it be if the doctors were paid a regular salary, health officers for looking after the children using what curative measures lie within their scope, and recommending other measures and other doctors to perform them as occasions arise. This arrangement might be made not as a legalized office simply between the parents of the organization and a physician in it.

The mothers' part is to believe in doctors, if they are good and competent, and to use their knowledge and skill in the restoration of their children to health and normal powers. Besides this faithful medical skill mothers must make their conditions just as healthful and happy as possible. They must see that their children go to bed early and sleep with open windows or out of doors; that they have enough nourishing food, and no food which is hard to digest; that their hours of rest are not too long nor depressing, and that they are frequently relieved by play. Mothers must co-operate with the teachers, also, keeping them acquainted with the health and home occupations of their children, and seeking to understand and assist the efforts the teachers are making.

The teacher cannot perform successfully her share in bringing backward children up to a level of usefulness and normality unless she separates them in their work from the brighter pupils. They are subjected to ridicule and cruel discouragement when they are expected to compete with the usual grade work. Even when they are placed in grades with other children, their poor vision or hearing, general ill health, stands absolutely in the way of their comprehension and progress.

A separate class should be formed for them, and, besides this, they should receive individual instruction. No child should be made to advance this class as a whole, but only to develop each child within it as far as possible. Although suggestion may seem to place an additional burden upon the teacher, she will find normal classes very much easier to handle with the backward children removed, in giving individual care to the retarded pupils she will be free from the anxiety of keeping them up to a certain impossible standard.

If they are under medical care the removal of physical defects may bring them forward in a few months to a degree of intelligence enabling them to enter more the classes for normal children. In the meantime they should be protected against humiliation and misery, and the principle underlying their instruction should be to train them along those lines for which they show some ability, not to drive them the sort of instruction which would show themselves incapable of receiving. Always it must be remembered that backwardness is an actual physical condition, not a moral weakness. They are to be backward, just as a man with one shorter than another has to limp.

Until their cure is well under way it is better not to give them much book work. If the school curriculum permits it, let them work with their hands and in the garden. School credit for home work is excellent in these cases.

Often backward pupils have unusual good memories, and when this is the case, the committing to memory of multiplication tables, of [CONTINUED ON PAGE



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Winds and Rains; Aches and Pains

EXPOSURE to bad weather this month means rheumatic twinges and other handicapping after-effects. We can't be too careful in relieving pains and aches, stiff joints, sore muscles, lumbago, sciatica. "We keep a large bottle of Sloan's Liniment in the house all the time to use when an attack comes on. You know Sloan's is one of the old timers. Doctor Earl S. Sloan put it on sale 37 years ago.

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How Mrs. Wilson Saves on Clothes

[CONTINUED FROM PAGE 54]

dressing well, and in a manner calculated to accent her own individuality. In the evening she is given to wearing gowns on modified Greek lines, with flowing sleeves and trailing draperies of rich materials. In the street she is always smartly dressed, and one never sees either of the President's daughters wearing thin georgette sleeves with a serge or cloth frock, high-heeled shoes with a walking costume, or ostrich feathers in the morning. The Vice President's wife, Mrs. Thomas Marshall, made up her mind when the United States went to war that she would buy no new clothes until the war was over: Now, the Vice President and his wife probably dine out more than any other people in Washington, so it's quite a feat for Mrs. Marshall to go through a winter without replenishing her wardrobe. She was able to manage it, however, as she is not stumped at the prospect of modeling a gown. Mrs. Marshall gets her gowns at one place in Chicago, and uses none but American-made materials.

One method by which a number of Washington women have been able to cut their expenditure for clothes is by picking up the lovely brocades, embroideries, and tissues they have picked up the course of their travels. Mrs. Joseph Ter, for instance, brought home all manner of beautiful fabrics from India, China, Japan, and the four corners of the world several years ago, when she and Mr. Ter crisscrossed the globe on George J. Gould's yacht, which they chartered for a cruise.

Mme. Bakhmeteff, whose husband, Mr. George Bakhmeteff, was Russian ambassador to the United States under the régime of the late Czar, also has a collection of magnificent brocades the like of which will probably not be seen again. The very ones on which they were woven have been destroyed by the vandals who are now terrorizing Russia. Her jewels are world famous, and she has a collection of emeralds, garnets, and diamonds, which are literally priceless, and are said to be second only in value to those owned by the late Czarina of Russia.

American brides have not gone quite to the lengths of English brides in discarding the conventional white satin and lace for the period of the war, although many girls elect to be married in evening or war costume. One case was the marriage of Miss Cecile de Legarde, who wore the uniform of a Red Cross nurse when she became the bride of Mr. Owen Johnson, the writer. She died but a year later, and was buried in the same costume.

Miss Lucy Kyle Burleson, daughter of the Postmaster-General and Mrs. Burleson, on the other hand, laid aside her woman's uniform for her marriage to sign Charles Greene Grimes, U. S. N., which took place at historic St. John's church, and wore the traditional bridal costume. It was built of soft ivory satin—American satin—gracefully draped and trimmed save for the bit of lovely rose tulle lace, the "something old" which every bride must wear for luck, which ended the end of the court train. The bride designed the frock herself to suit her tiny and petite type, and it was made up in a Washington modiste.

So, you see, there is simplicity and economy among our society sisters in Washington, just as there is among us everywhere in the country.

Why Have Backward Children?

[CONTINUED FROM PAGE 56]

Grammatical rules, and of fine bits of poetry and prose may be included in their studies. But do not expect them to be able to reason from these facts which their memories hold; do not expect them to be able to apply the facts they have, or to combine them with other facts. They cannot do it, will not be able to use their imagination until eyes, ears, lungs, and skin are working properly.

Almost a divine patience is required of a teacher of backward children; but her task is made easier if she lets them set their own standards according to their abilities, instead of imposing on them the curriculum for healthy youngsters. Let their work periods be short and frequently

interrupted by opportunities for play—at least the privilege of running two or three times around the schoolhouse.

The object of the Parent-Teacher Association is the harmonious and intelligent working together of the three factors upon which the development of backward children depends: Medical and surgical cures, home hygiene and tender patience and affection in family life, and educational methods suited to the condition and powers of the children. At the very base of the work lies the skill of the doctor in producing a body mechanism which will "go." The guidance of this human machine and its upkeep and progress depend on the spiritual forces of the home and the school.

Picking Up the Crumbs

By W. M. Whitting

IT IS not necessary for a housewife to purchase boxes of cracker meal or cracker dust for use in preparing croquettes, scalloped dishes, or fried foods. Every one has noticed what a quantity of crumbs are left when slices of bread are cut from a loaf, especially a loaf that is a bit stale. It takes only a few seconds to brush these crumbs up carefully and place them in a receptacle.

If this is repeated after each cutting it is surprising in what a short time a quantity will have been gathered together.

Slices of bread left over from a meal often become hard and stale, and when crushed may be added to the crumbs and used in cooking.

Desserts from Home-Canned Fruits

By Edith C. Armbruster

WHEN the family begins to tire of canned fruit, or when a company dessert is desired, try combining with other materials some of the fruit you put up last year. A simple and inexpensive substitute for whipped cream to serve with desserts may be made by whipping the white of an egg until stiff, adding one tablespoonful of powdered sugar, and folding in the mashed pulp of a banana. Do not prepare this until just before serving, as it turns dark if allowed to stand too long.

PEACHES AND CREAM—Place upon each serving plate a round piece of sponge cake or any plain cake. Lay on each slice half a canned peach, hole side up. Whip a cup of cream, flavor with vanilla, and sweeten. Cover each peach with the cream, and garnish with a bit of currant jelly.

BLACKBERRY LOAF—Bring a quart of canned blackberries to the boiling point. Place squares of fresh cake in a square granite pan. Cover with generous spoonfuls of the hot blackberries and juice; add another layer of cake, packing it in well, then more fruit. Alternate until the dish is full, using plenty of berries, as the cake will absorb a quantity of the juice. Cover with a plate, and place a weight upon it. Let it stand several hours. When cold, turn it out of the mold, and slice evenly. Serve with cream.

STEAMED CHERRY PUDDING—To one pint of sifted flour add two heaping teaspoons baking powder, half a teaspoon salt, and one heaping tablespoon sugar; rub in one heaping tablespoon fat, and add enough milk to make a stiff batter. Grease cups, and into each one put a layer of batter, then one of canned cherries drained of their juice, and so on until the cups are three-fourths full. Steam for thirty minutes. Serve with a cherry sauce made with one cup cherry juice, one-fourth cup sugar, one-half cup water, and one heaping teaspoon cornstarch.

RASPBERRY FOAM—Cook two heaping teaspoons prepared tapioca in one pint raspberry juice until tapioca is clear; add a pinch of salt, and sugar if needed; remove from fire, and while hot fold in the stiffly beaten white of an egg. Serve cold with cream.

PINEAPPLE WHIP—Mix together one cup canned pineapple cut into small pieces, one cup cold boiled rice, and one-half cup sugar. Whip one cup cream, and fold in lightly. Serve in sherbet glasses, and garnish with a preserved cherry.

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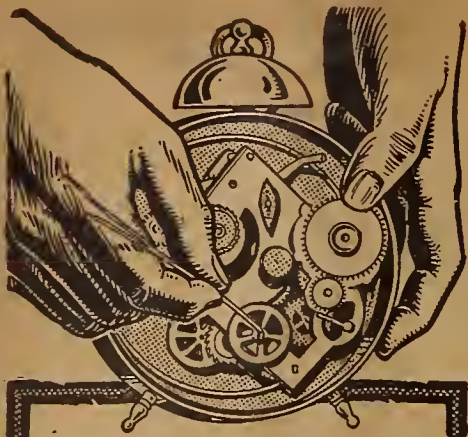
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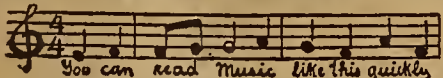
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Vell in Love With My Husband

By the Readers of Farm and Fireside

THERE was a great reason why I should have fallen in love with the man who is now my husband, for next to God it is to him I owe my life and happiness.

It was in the long ago—almost forty years—and my head, silvering slowly but surely, is full of memories. This subject brings me back to the day when I was journeying westward to a noted health resort in a last effort to prolong my life, even for a few weeks. My dear father accompanied me, gravely apprehensive for the effects of the journey upon my weakened condition.

On our train was a big, happy man in a cowboy costume, fairly bubbling over with good health and high spirits. His big heart went out in pity and sympathy, and he was constantly on the alert to brighten my journey, and to help Father in his many duties of caring for the poor invalid. Whenever he was near me I seemed to take on new strength and new courage. It was good to clasp his firm, strong hand and to hear his hearty laugh. When our journey came to an end he sojourned at the same hotel with us, and seemed in no hurry to leave. All this time he was cheering me and bringing me back to life once more. Everyone was interested and commenting upon my improved condition; and, indeed, it was true.

One day Jim mentioned that he ought to be leaving soon, but this news brought such a sad transformation to poor me that he quickly decided to remain a little longer. Soon I could take short walks, gradually increasing the distance, and finally horse-back rides. My eyes were bright and sparkling with dawning love—each day bringing a great happiness. Nearly a year passed, and one bright day Jim and I walked to the little country church, and I gladly gave my life into his keeping.

Good health and perfect happiness have been ours, but our home has always been in the big free West. Jim's business calls him eastward every year, but we are ever anxious to go back to the land that gave us our great happiness. C. E. S.

She Married the Huckster

Second Prize, \$10

WHEN I was at a young and giddy age my ideal of Prince Charming was a young, tall, slight-limbed, dark man with proud, passionate disposition, preferably Spanish, as that race best answered that description from what I had read in so many paper-backed novels.

There was a man about six years my senior who drove a huckster wagon for four or five years. He came to our house regularly twice a week. He was a fat, plain, old-fashioned sort of boy, and I thought him rather odd. I was buying some articles from him one day and was short one cent. He let me go into the house and get the penny. I told him he was stingy. He just sort of smiled the way he had, and said nothing. I thought for the first time that he had good eyes and a nice smile, even if he was stubborn and stingy. After that I started an argument on something every time he came. He came on his wagon in every kind of weather—even on cold days in winter, when most people stayed in.

Well, one day he said his brother would be on the wagon next week, as he was going to New York. I said good-by to him; said I hated to see him go, wished him good luck, and that was all I did say. I didn't say anything about his writing to me, but I expected that he would. He did! We corresponded the year he was gone, and I got to thinking that there wasn't anyone I knew that was quite so good-natured, comfortable, everyday sort of a person as Jim. My ideal of the lithe, dark, high-tempered gentleman was smashed. That was all right to dream about, but a fat, plain, mild-dispositioned man was better to live with.

He came home, and we were married in two months. I don't call him stingy now, because he isn't. That was just one of his peculiarities about the penny. V. L.

He Was So Thoughtful

Third Prize, \$5

IHAD always liked Ben; we had been chums since childhood, but the possibility of him as a lover had never entered

my mind. My "beau ideal" along that line was for some dashing cavalier to come along with whom I could fall desperately in love and have a real romance, just as pictured in novels.

Well, he came, showered me with at-

Returned Soldiers and the Land

LOOKING at it from a farm viewpoint, we can't get all excited about this idea of hurrying returned soldiers back to the land.

The returned soldier who wants to farm, and who knows how to farm, will farm. He needs no encouragement. He does deserve help.

The returned soldier who *doesn't* want to farm, even if he knows how to farm, will *not* farm. And encouraging him to farm won't get him to do it. And if it does get him to, though he doesn't want to, he will be a doubtful asset to farming.

The swivel-chair experts, who have been making most of the talk about the returned soldier as a farmer, seem to feel that it is our duty to toss our hats in the air and shout hurrah for the idea. They say it will reclaim thousands of acres of waste land. Maybe it will.

Considering it as a *service* from the Government to the returned soldier—provided the soldier *wants* it—we do shout hurrah. But as a movement fraught with great benefits for the American farmer we can't do much for it.

The soldiers who were farmers before they became soldiers, and who come back to the farm, will find jobs waiting for them. And they will be thrice three times welcome. And if they want farms, and the Government has *decent* farm land to offer them—land which is equipped and ready for farming—we say let them have farms.

But if the Government or any individual is counting on turning new men into the farm field with the idea that those men are going to be a great boon to agriculture, they have another guess coming. Maybe a few of them would see it through and become good farmers, but the percentage would be small. The majority will "try" farming because they "think maybe they'd like it," or because they are invited to.

Turning untrained men loose on farms—especially on reclaimed farms—to be farmers is just like turning men loose in a highly organized watch factory and saying to them: "All right, boys, here's a watch factory. Now go ahead and be watchmakers."

You know about how much of an out they would make at it. We'd hate to catch a train by one of the watches they turned out under five or six years' apprenticeship. Or to bank much on the success of apprentice soldier-farmers under the same length of time, even with agricultural experts to teach them.

Farming is a science and a business, to be learned by long apprenticeship, just as is watchmaking.

The soldier boys who are farmers at heart will go back to farming. Nothing could keep them from it. The soldier boys who are not farmers at heart will go back to something else.

The soldier boys who want farms should get them. They should get *good* farms. *Plus* the equipment to make a success with them.

But the man who believes that we can indiscriminately herd thousands of young men onto farms and make a go of it has rats in his estimable belfry. THE EDITOR.

Finally I was invited to his home to make the acquaintance of his family—and how very different he seemed among his own people! He was crusty, crabbed, and sarcastic; disrespectful to his mother and sisters; arrogant with his father. I tried to excuse it, as we always do when in love, thinking it was because of his superiority; but before the visit was over I found that he himself felt so conscious of it that it caused him to deteriorate in my estimation, although I still felt myself very much in love with him.

Soon after that I was a guest at Ben's home, and in spite of myself I could not keep from continually comparing the two young men in their home life. I had hitherto taken Ben so much as a matter of course that his true worth had not been very forcibly brought to my mind. I noticed at this time how every member of the family depended upon him, and how cheerfully he attended to all their wants. He fixed his little sister's sled; showed his little brother how to set his trap; was his mother's right-hand bower and his father's chum. I wondered how all this had escaped me before.

Shortly after, at a public gathering, he came in with his mother on his arm, and some of the young folks began to joke about his "best girl." He said, "Well, I've got a girl now that won't go back on me, and I'm going to stick to her." He gave me a look I could not help but understand, while to the others it meant only a pleasant retort, and for the first time in my life I began to take myself seriously. The more I thought of Ben the less I thought of "my romance." In Ben I saw the ring of the genuine—the one to whom to tie "for better or worse."

Years have passed and we have had all the ups and downs incidental to rearing a family of four children. They are all in homes of their own now, and we find ourselves all alone once more.

The sterling qualities which made me "fall in love with him" then are as much evidence as they ever were, and our lives have merged closer, and we are more to each other than we ever were. So I had my real romance, one that has lasted for years, and I know will last until "death do us part." I. M.

She Wanted to Kiss Him

LIKE a good many young things at college, we had decided to be "friends," purely platonic and intellectual, you know. Then it came time for Clifford to go away—he had graduated and I was in the midst of my course. We stood saying good-by with laughter, both of us pretending not to notice that he held my hands. All at once it seemed to me that it was very serious that he should be going away, and suddenly I wanted dreadfully to kiss him good-by. My laughter fled and I could not think of anything to say. The new longing and shame confused me.

We found ourselves gazing at each other blankly. Then he lifted my hands, turned them over gravely, and kissed them both in the palms. Before I had caught my breath he was far down the walk. It was very dark. I ran out, calling breathlessly and was upon him before I realized. He caught me, "What is it? What is it you want?" And I did not know.

The perfume of the June night filled the air, and under the maples it was too dark to see, but I felt the pressure of his presence like a wind. I reached my hand to his face. His eyes were wet!

"Only this!" I sobbed, and drew his head down and kissed his wet eyelids slowly, deliberately. My shame was all gone.

Naturally it was eleven instead of ten when we parted. That hour convinced me that I loved Clifford, but after reflecting I was not sure that I wanted to marry. I had ambitions and plans. Anyway, we had not talked of marriage. Our hour had been full of love and delirious with kisses—a wine as new to him as to me.

At Christmas time he sent me a diamond ring, and I hesitated to wear it. It proclaimed marriage, and I was not sure that I wanted marriage. Besides, he had not asked me. So when he came back again and held out his arms, I kept back—I was not sure. But again that amazing, inexplicable desire to kiss him overwhelmed me. So we were married ten years ago, and I have always been glad of it. A. W.

tentions, flowers, candy, theatre parties galore, and I thought my romance had materialized. He proposed in the manner that suited my fancy, and I accepted.

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FARM AND FIRESIDE

The National Farm Magazine

APRIL 1919

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What About \$2.26 Wheat?—By Walter E. Weyl

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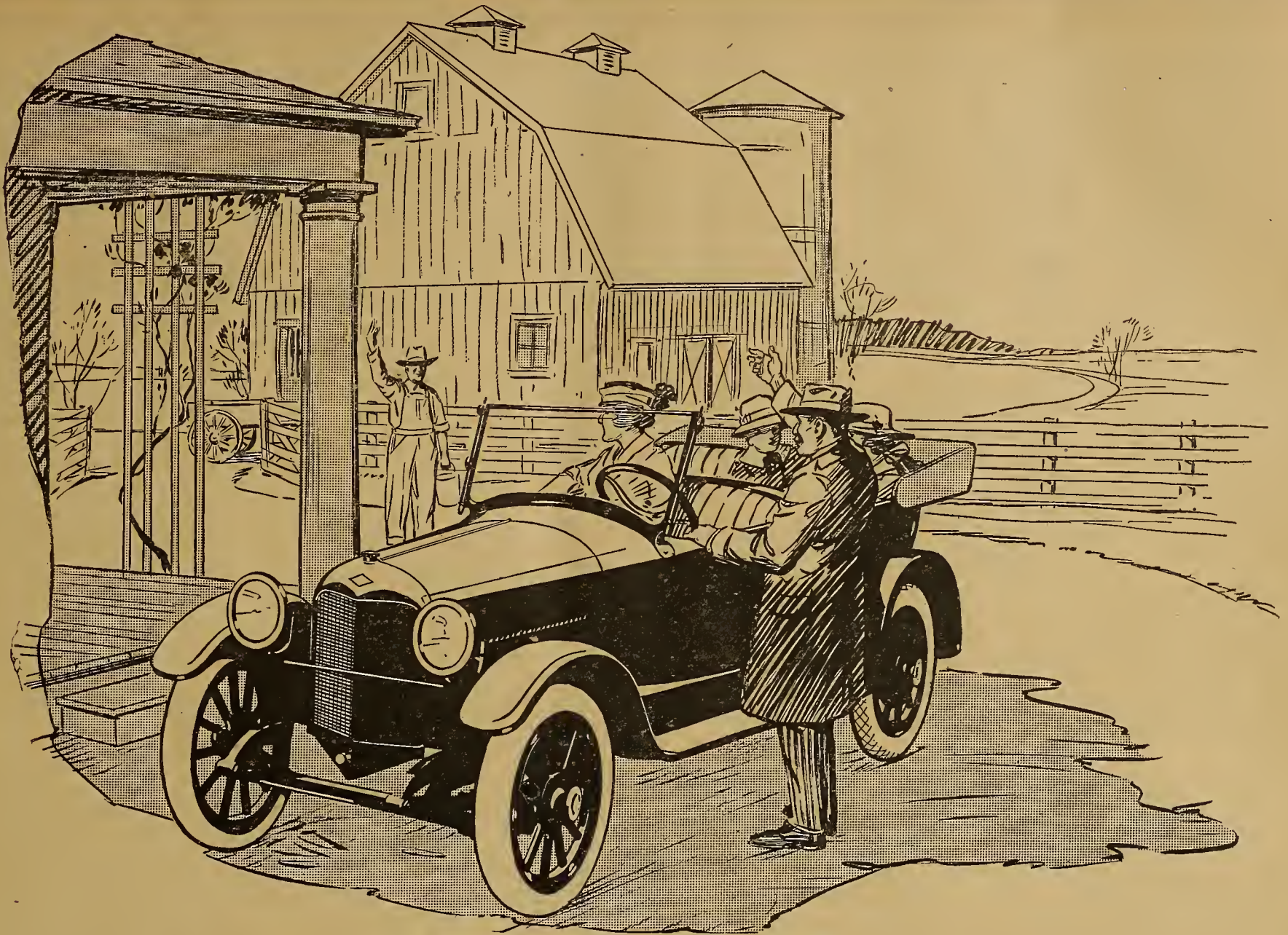


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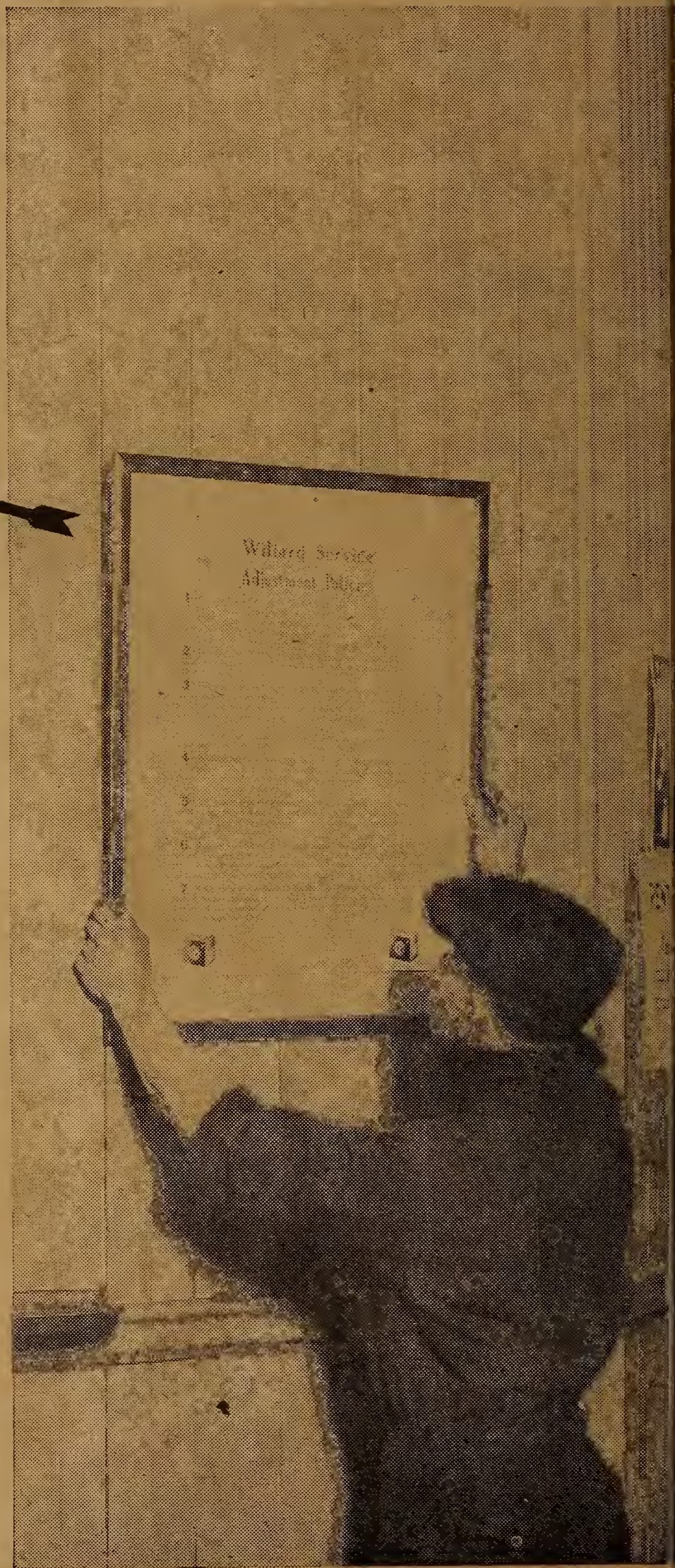
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What About \$2.26 Wheat?

By Walter E. Weyl

THE Government of the United States and the farmers of the United States entered into a contract. Under this contract the Government guaranteed a minimum price for the wheat crop of 1918 and of 1919. Whatever the wheat is worth in the markets of the world, however low the price may fall in England, France, Germany, or Italy, the United States Government stands ready to pay the farmer a price approximating \$2.26 a bushel.

The Government entered into this contract while the fighting with Germany was still on. It made the arrangement because it felt the necessity of stimulating in every way the production of wheat. Unless our armies and the armies of our allies, unless our own population and the populations of our allies, were able to receive a steady flow of food from this country, the war would be lost. No price was too high to pay for this assurance of victory. It was in this spirit that the Government made its guarantee.

The war, however, or at least the fighting, is ended. It ended suddenly, and almost without warning. The result was that the wheat guarantee which was intended to protect the United States and its allies has become a matter of great embarrassment to the United States Government.

It is important for the farmer to understand this situation in all its details. It is important to him both as a farmer and as a patriotic citizen, both as a producer of wheat and as a taxpayer.

Can We Store the Surplus?

The situation is as follows: The Government having given its word must keep it. The Government will keep its word, as it has in the past. It will stand ready between now and June 1, 1920, to buy every bushel of wheat of the crop of 1918 and of the crop of 1919 that is offered to it before June 1, 1920, at a price approximating \$2.26 a bushel. Under this contract the Government must be prepared at a maximum to accept from one to two hundred million bushels of the crop of 1918, and from ten to eleven hundred millions of bushels of the crop of 1919. The Government must be prepared at the worst to make a disbursement of three billion dollars.

Nor does this end the liability of the Government of the United States in this matter of the wheat guarantee. It is highly probable that the world price of wheat will fall considerably below the guaranteed price of \$2.26, and this difference must be made up by the Government. This will involve a loss which may be well over a billion dollars. Further, the Government must create an administrative machinery for fulfilling this vast contract with millions of farmers in order to prevent speculation and fraud. It must further discover or create storage facilities for hundreds of millions of bushels in excess of our ordinary supply. Since the guarantee does not and cannot apply to wheat grown elsewhere than in the United States, the Government must either regulate or totally prohibit the importation of foreign wheat. It must also work out a policy for the final disposition of this wheat, for by June 1, 1920, the Government will be in possession of a surplus amounting to four hundred or five hundred or even six hundred millions of bushels in excess of the immediate demand.



Copyright by Paul Thompson

For the First Time—the Facts

A LOT of people have tried to explain this wheat situation to us, but not until we got this article did we feel that we had found an unprejudiced man who knew exactly what he was talking about. And in sending it to us this is what he said:

"I have tried to put the emphasis on what the farmer should do in this matter. I do not feel that it is fair to ask him in all cases to refrain from growing wheat, or, indeed, to make sacrifices beyond those which may be asked of other classes in the community. At the same time I have made as strong an argument as I could against any disproportionate growing of wheat this spring, and have tried to emphasize the fact that the farmer as well as the rest of the community has a definite interest in the crop not being too large."

Weyl is a man who deals in facts, and he is well worth listening to. What do you think about what he says? THE EDITOR.

As a consequence the Government is faced with one of the most difficult and complicated transactions in its history. It is obliged to purchase more wheat than it can use or profitably dispose of; and, while little of this wheat is as yet harvested and one third of it is not yet even sown, an excessive production is inevitable. Unless the Government works out a proper policy,

there will be infinite complications and lawsuits, there will be carelessness and fraud, and in the end the policy will injure not only the Government but also the farmers themselves. Having made our promise, we must keep it. We must take our losses smilingly.

We must not, however, permit the fulfillment of this guarantee to become a scandal

and a needless injury. Nor is it likely to.

It was the Food Control Act of August 10, 1917, which established for the United States the policy of guaranteeing the price of wheat.

This act authorized the President to guarantee a minimum price whenever he finds "that an emergency exists requiring the stimulation of the production of wheat." By the same act the President was authorized "to purchase, to store, to provide storage facilities for, and to sell at a reasonable price, wheat" and certain other commodities. For the purposes of the act the sum of \$150,000,000 was appropriated.

Laws do not administer themselves, and in order to carry out these sections of the Food Control Act the President on August 14, 1917, ordered the creation of a corporation, to be called the Food Administration Grain Corporation, with a capital of \$50,000,000, which was later increased to \$150,000,000. All of the stock of this corporation was to be subscribed by the United States out of the appropriation authorized by the Food Control Act. It was not until February 21, 1918, that the President, acting under this congressional authorization, fixed a price of \$2.20 per bushel for No. 1 Northern spring wheat, or its equivalent, at Chicago, and a relative price for other grades and for wheat received at other terminal points. At a later date this price of \$2.20 was increased to \$2.26 for the crop of 1918, and on September 2, 1918, the President fixed this same price (\$2.26) for the crop of 1919.

The Government is thus faced with a liability for two wheat crops, the crop harvested in 1918 and the crop harvested in 1919. This obligation to purchase the 1919 crop lasts until June 1, 1920.

It is well to consider these two liabilities separately.

In 1918 the wheat harvested in the United States amounted to 917,000,000 bushels. With one exception it was the greatest wheat crop ever harvested in the country. It was 40 per cent larger than the crop of the year before, and 25 per cent larger than the average of all the crops for the ten years preceding.

What Will Uncle Sam Lose?

The crop was very welcome. It was so large that it would have enabled us, had the war continued, to send to Europe almost 200,000,000 bushels of wheat in excess of our export of the preceding year. The great wheat crop of 1918 was a victory for the Allies and a defeat for Germany. Moreover, while every bushel of this crop was guaranteed, the Government up to the present writing has not been called upon to make up any losses. The demand for wheat was even greater than the supply, and the guaranteed price was probably smaller than the price would have been under unregulated supply and demand. The home consumer was willing to pay the price, and Europe was anxious to secure all the wheat it could at this price plus the high cost of transportation. The price guarantee therefore cost the Government nothing.

In all probability, however, the Government will be obliged to take some loss on the unsold remainder of the 1918 crop. Of the 917,000,000 bushels in this crop only 588,000,000 bushels had up to November 29, 1918, been moved from the farms. In other words, some [CONTINUED ON PAGE 16]

He Shows Farmers How to Get Money

If every bank had a man like Murray D. Lincoln, the bankers and the farmers of this country would both be richer

By Albert Sidney Gregg

THERE is a common ground on which the farmer and the banker could come together and do more business — business that would mean more money in the pockets of both. Yet, out of all the thousands of bankers in this country, only about twenty-five of them are cultivating this ground in a big way. A few others are cultivating at it. And even they are prospering, by making the farmer prosper.

I refer to those banks which employ farm experts to arrange loans to farmers. He is a sort of interpreter, who interprets farming to the banker, and banking to the farmer. That has been the great misunderstanding between the banker and the farmer—they didn't speak the same business language. The bank's farm expert gives them both a brand of conversation they can understand—facts.

I have just interviewed such a man. His name is Murray D. Lincoln, and he is the farm expert for the Society for Savings of Cleveland, Ohio. After we had talked for a little while I became aware that I was dealing with a double personality—a man who was all farmer and all banker.

He began as a farmer and evolved into a banker. Bit by bit I dug out of him the story of his career. His evolution is of particular interest to farmers because in the process Lincoln has not in the least lost the point of view or the mental processes of the farmer, while in addition he has acquired the point of view and ways of thinking of the banker. The high spots in his career are significant, for they indicate the influences by which a man's views may be changed.

Lincoln was born on a farm near Brockton, Massachusetts, and lived there until he was a young man. He had the usual farmer point of view, and was anxious to succeed as a farmer. So he attended the agricultural college at Amherst, where he acquired a fine assortment of scientific knowledge as applied to agriculture. Then he went out as county agent for the school, to spread the new science among the farmers of the State. He was still a farmer, although he was an advanced farmer. He was enthusiastic, and could impart his enthusiasm to others; but he became aware that he was bucking against some influence that seemed to be antagonistic to what he was teaching.

How Lincoln Did It

Then he sat down and did some very tall thinking. He analyzed the situation just as an efficiency expert would take any business to pieces to find out why the wheels did not go around. At length he reached this significant conclusion:

The supreme need of the farmer is more capital for the development of his farm, plus ideas of business management.

The farmers he had met were perfectly willing to rotate crops, use better fertilizer, and raise more live stock, in harmony with scientific suggestions; but they were not always able to respond, because they did not have the capital with which to make the start, and could not borrow the money from the town bank.

Thus the question of better farming narrowed itself down to the question of banking and business methods as applied to farming. After he had satisfied himself that the farmer needed cash in order to realize on his scientific knowledge, Lincoln resolved upon a new line of action.

He went to some of the near-by town bankers, and tried to induce them to make loans to farmers just as they did to merchants and manufacturers. But Lincoln received no encouragement. He ran up against the cherished tradition that a banker should not loan to a farmer unless the farmer was willing to put his farm "in hock," which some were unwilling or unable to do. Lincoln urged the bankers to loan to farmers on notes, just as they did to other business men, but the bankers objected because such loans would have to be for a longer period than ninety days. Furthermore, they did not have a very high regard for the business sense of farmers. This seemed to worry them more than the length of the loan. The specific objection

was that the average farmer did not keep accounts, knew nothing about analyzing his costs, and seldom knew exactly how he stood financially. This was jolt number one, which helped to open Lincoln's mind to the banker's point of view. He had never thought of it in that way before, but once he saw the point he could not ignore it.

However, he kept right on teaching science to the farmers, and trying to hammer "financial sense" into the bankers.

About this time the president of the Plymouth Trust Company at Brockton got an idea that he would like to do something that would attract farmers to his bank. His ideas were not very well defined, but he knew he was on the track of something worth while.

Then he displayed real executive and financial genius. In place of undertaking the task himself he went to the agricultural school at Amherst and made inquiries for a promising graduate qualified to conduct a "farm department" in his bank.

the money he loans. Following the suggestions of older men in the bank, he gradually learned to estimate the reliability of a particular applicant. He had his first surprise when he tried to find out how some of his clients stood financially. They all had the resources, but did not understand how to put them into bankable shape—and that is where Lincoln came to the rescue. They could not all tell whether the brindle cow was a liability or an asset, for they had not kept a separate account of her milk or calves. Lincoln taught the farmers with whom he came into contact how to analyze their expenses, and find out just where they were losing and where they were gaining, and thus he got down to the fundamentals of efficiency. Some were induced to start a set of books, while others were persuaded to have the bookkeeping done by another member of the family.

While this was going on, Lincoln projected a pig club, which was then a new

notes came due the increased income of the farmer from the cow enabled him to meet the note easily.

That is Lincoln's theory of loaning to the farmer. Let him have money from time to time on his own note, for approved uses that will positively increase his income, and thus enable him to meet his obligations when they fall due.

"If we can show the farmer how to produce more with a given amount of labor, all will share in the benefits," said Lincoln.

"Once we put the farmer in the way of making more money, there will be no trouble about getting the accounts of the farmer," he continued. "Neither will there be any trouble about the farmer's obtaining all the expert advice he needs from the banker. When I advise a loan I do so only after I have found out all about the applicant's business and just what he expects to do with the money.

"For instance, Mr. Jones wanted to borrow \$200 to buy a horse. I questioned him about his business, and found that his condition was rather better than the average, yet he had not been getting ahead fast enough. I finally found that he had four cows that were yielding only a few hundred dollars a year. I pointed out that the only way for him to increase his income was not to buy another horse with which to raise larger crops, but to buy more and better cows. He already had two horses and a colt. So I passed the loan for \$200 to be used for cows, very much to the satisfaction of Mr. Jones, after I had analyzed the situation for him.

"Time for Turn-Over"

"Then I asked him why he had not analyzed his own affairs, and figured the matter out for himself. His reply really touches the very heart of the farmer problem. He said: 'I have been so busy digging a living out of the ground that I have not had time to analyze anything.'"

Besides the pig clubs and the sale of high-bred cows to the farmers, the Brockton bank, on one occasion, disposed of over 600 tons of seed potatoes, which were brought directly from Maine and distributed in small lots to those interested in a home garden. These various activities linked the farmers up with the bank, and brought in new business just as fast as the farmers realized on their new investments. But this business could not have been obtained if the bank had applied the usual rule of short-time loans.

The farmers were given more time in which to make their turn-over.

"Time for turn-over" is the whole question in a sentence. A merchant may turn his stock in ninety days, but a farmer requires six months or a year to plant, reap, and market his crop. Lincoln is telling his banker associates that it is worth while to give the farmer the additional time that he needs. The banker will get the benefit not only in direct loans, but also in the increased productiveness which will effect all lines of business.

The results at Brockton are a striking illustration of the proposition that it pays a bank to employ a farm expert to help the farmer solve his problem. It cost the Brockton Trust Company about \$4,000 a year, net, to maintain expert service for farmers; but as a result of this service the deposits increased in five years from \$500,000 to over \$3,000,000.

Several years ago Myron T. Herrick, president of the Society for Savings of Cleveland, learned of Lincoln, and offered him a large field in northern Ohio, and Lincoln accepted. He looks after farmers in seven counties, and is doing much to help them to solve their problems. Only about twenty-five banks in the United States now employ farm experts, the Society for Savings being the only city bank that has such a specialist.

With the development of this movement capable young men with practical farm experience, supplemented with scientific training, ought to find numerous openings where they can learn banking and become farm-banking experts for city and large town banks. It is a good idea. Put it up to the banker in your town.

Let's Quit Playing "Blind Man's Buff"



Murray D. Lincoln and his farm traveler

BANKERS and farmers haven't done near enough business together in the past, because they didn't understand each other. The banker thought the farmer was a poor risk because, in seeking a loan, the farmer couldn't always give the banker as clear a statement of his assets as the banker wanted to have. The farmer thought the banker was a skinflint and a grab-it-all. They were both wrong.

This article about a man who is both a banker and a farmer explains all that, and offers a solution. The bank that first hired him to help it understand the farmer boosted its deposits, in five years, from \$500,000 to over \$3,000,000. And, incidentally, made many farmers rich. He worked no miracle—just taught the banker and the

THE EDITOR.

Everybody told him about Lincoln. Thereupon the bank president sought an interview with Lincoln, with the result that Lincoln was invited to visit Brockton and meet the directors. Up to that point he had not been offered the position the banker had in mind. Lincoln saw the directors—who were sage and conservative old gentlemen—set forth his ideas, answered their questions, and gracefully retired. As he had expected, they turned down the entire proposition.

But such action did not discourage the president of the bank, who was determined to employ Lincoln. Another session of the board was held, and this time the directors voted a small appropriation as an experiment, with the understanding that the president would personally make up part of Lincoln's salary.

Under those conditions Lincoln began his work. He was still affected by the old feeling that bankers were nothing but unholly money grabbers, and he had yet to get the banker's point of view. But eventually the very nature of his work forced him to see some things in entirely different light. It was part of his work to pass on loans to farmers, for this bank was lending small amounts to farmers on notes.

He has to face the question that every banker faces, and that is the security of

idea. In the name of the bank he offered to supply 50 pigs to as many boys and girls, the pigs to be raised by them and sold in the usual way. There was such a demand that 50 pigs did not begin to go around, and it was necessary to increase the number. A prize of \$100 was offered to the boy or girl doing the best job as a pig raiser, this money to be available only in case the winner should go to some agricultural or domestic science school.

The pig club in one year yielded over 67,000 pounds of pork, with a market value of over \$9,000. The average per pig was \$6.58, making a total profit to the members of \$2,500. This is all very interesting to those who have never had a part in a pig club, but it is not the big point that I wish to make stand out so everybody will see it. The big idea was that the pig club was capitalized by the bank, and that each boy and girl who got a pig to raise signed a simple note with interest, which was to be paid when they sold the pig.

The next step toward developing business relations between the bank and the farmers was for the bank to sell high-grade cattle to the farmers. Cows were sold on easy terms—one-third cash, and a note for the balance, signed by the farmer, no other security being required, not even a mortgage on the cow! By the time the

A \$1,000,000 Market for Your Dairy Stuff

But dairymen must get together with the manufacturers and Congress if they're going to cash in on it

By Edward N. Hurley

Chairman United States Shipping Board

WE PRINT this article as much for the comment we hope it will bring forth, as for the suggestions it contains. We hope in an early issue to have a reply to these statements from one of the big milk manufacturers who would be one of the exporters, and from one of the big milk producers who would supply the exporters.

THE EDITOR.

ONE of the biggest after-war problems which we now face is that of putting the American Merchant Marine into the American imagination, particularly the imagination of the American farmer.

You live inland, largely you know the value of transportation facilities to yourself as a producer. But lacking familiarity with ships, you may not always visualize them as part of your transportation equipment—something that will help you market your farm products just as your local railroad spur helps you.

As you are the greatest producing American of us all, both in numbers and values, it is highly essential that we give you a clear picture of possibilities. If we can do that, your backing of public opinion will help us, more than any other one influence, make the American Merchant Marine an actuality.

Probably the biggest factor in American farming is the dairy cow. Therefore, I have had some studies made of the dairy cow in her relation to the American Merchant Marine, and should like to talk a little straight business to you farmers as one business man to another.

In 1915 about 50,000 American dairy cows produced all the milk that went into our exports of dairy products. Today, nearly 500,000 cows are required, so great has been the expansion of world business in this line, figuring 4,000 pounds of milk annually per cow.

In 1913, only 17,000 cows produced all the condensed milk we sold abroad. To-day, something like 325,000 cows are producing milk to go in cans for foreign customers.

Will We Lose It Now?

In 1914 we sold John Bull just 312 pounds of condensed milk. In 1918 we sold him nearly 250,000,000 pounds. Our world trade in condensed and evaporated milk has jumped from 16,000,000 pounds in 1914 to 528,000,000 pounds in 1918. Incidentally, during the war, our total production of condensed and evaporated milk has doubled, growing from 15,000,000 to 30,000,000 cases.

Now, how much of this business will the old cow hold in the new peace times ahead of us?

Will we lose the great export growth brought by war? Must we drop that gain of 15,000,000 cases and go back to pre-war production, restricting outlets for the dairy farmer?

These are questions which require study by the farmer, the manufacturer, the exporter, the legislator. The farmer is not only most vitally concerned, but I believe that his business ability and team work will be the deciding factors. He knows that the condensaries and evaporators relieve him of surplus milk production during the flush summer season. Normally, there is always a home demand for butter. What he wants is a market for his summer milk surplus. Canned milk furnishes that market. Every possible outlet for milk in cans, both at home and abroad, is worth cultivating—not only to take care of surplus, but also to make room for steady growth in dairy farming, and all the admitted benefits it will bring in balanced agriculture.

We are going to have American merchant ships to take our products to world markets. But ships must be backed by trade outlets in other countries—that is, we must be able to market the goods after we get them there. Moreover, we must look around the world and see how other producing nations conduct export business.

Before the war the American dairy cow faced stiff competition in world markets. Europe had splendid dairy industries. Labor was cheaper there than in this country, and so were raw milk, tin plate, sugar, and other ingredients of production. Europe also had cheap internal transportation and splendidly organized ocean transportation, which were skillfully worked together.

The American condenser's raw milk

than American tin plate. Beet sugar from European fields was cheaper. Finally, Europe and many of the countries where European canned milk was sold had protective tariffs against our product, ranging from 38 cents a case in Switzerland to \$3.40 in Sweden.

Despite our disadvantages before the war, however, I believe that peace finds us with some very definite advantages.

For one thing, we now have merchant

would happen when such methods were used to build up a steady export trade.

Finally, we have an advantage that cannot be utilized—if we want to play fair with humanity. That is the advantage due to depletion of European dairy herds through war, and the inability of European dairying nations to regain their old vigor for a time. The herds have been slaughtered and stolen in Belgium, France, Poland, Serbia, Roumania, and Russia. England has suffered along with Germany, and even the neutral countries like Holland, Switzerland, and Scandinavia have been forced to slaughter for lack of feed, and also for food. It is certain that all these countries will build up their herds and their dairy trade as fast as possible—they have to do it as a matter of feeding themselves and paying their war bills. But it is also believed that the process will take some years, and meanwhile other countries should continue to look to us for dairy products, and we can honestly supply the demand and also establish business connections.

When you weigh one thing with another, the advantages against the disadvantages, it seems to me that the American dairy cow and the American Merchant Marine must be systematically tied together by national team work.

To overcome disadvantages of higher costs and our American scheme of living, breeding might be the place to begin. By this time the agricultural experts have clearly convinced the American farmer that the scrub cow does not pay her way. Yet the country is still full of scrubs, and we must replace them with first-class bulls and first-class producers of milk and butterfat.

How About Margarine?

As we have had no merchant marine the past two generations, chiefly because there was not a clear picture of the American Merchant Marine, I think our farmers still keep the scrub cow and pay her board largely because there is not yet in their imagination a clear picture of the profitable well-bred cow. Is it not possible that the picture of both an American merchant marine and the high-class cow may be put into the farmer's imagination at once, through team work between breeders and dairymen's organizations?

Another form of team work must be that between the American farmer and the American manufacturer of milk products. In the past, sympathetic contact has been lacking. Manufacturer and farmer have come together chiefly on questions of milk prices, which really pull them farther apart in the end. The manufacturer has not always appreciated the farmer's difficulties, and the farmer has left the manufacturer to develop products alone, and fight alone for export trade. If they can be brought together, and get acquainted with each other, and see this big industry in its world aspects, with problems of competition and tariffs in other countries, much might be done in the way of real constructive development.

Tariffs are influenced by public opinion. A single manufacturing interest like the milk products industry has usually little success in getting these questions before our national legislators, and having them taken up with other countries for reasonable adjustment. But if the dairy farmers of the country and the manufacturers and breeders and exporters could come together and study these questions nationally, and put a clear national public opinion behind them, then undoubtedly Congress and our tariff commission would be able to seek international adjustments.

In other countries the dairy farmers are working closely with their Governments.

For years the Danish farmers have been eating margarine themselves to increase their exports of butter to the best markets, and they have arrived at a business arrangement which seems to be better than the antagonism between the margarine manufacturers and dairy farmers in this country. They have been so successful, in fact, that the [CONTINUED ON PAGE 24]

You Can't Try This on the Old Mill Pond



Photograph from J. Dickie

IT WAS up on Rainy Lake, in the territory known as New Ontario, that two hunters recently added moose-riding to their other accomplishments. When you consider the skill needed to get from a canoe on to the back of the steed, you begin to realize the possibilities of the game. Moose are the best swimmers of the deer family, and it was the habit one big fellow had of crossing the lake to save a few miles' journey that gave the hunters their chance. They ranged alongside of him in the canoe, and then the bowman made the jump.

For a short distance the frightened animal distanced the canoe despite the best efforts of the remaining paddler. The rider was careful to dismount just as the moose reached the shore, fearing that his mooseship might not see the joke.

cost him more, and so did sugar and tin plate. His freight rates were higher, and so was his labor. If his products went abroad at all they went in foreign ships. On top of that he found high tariff walls in other countries, and instead of building world trade he was actually facing stiff competition with foreign canned milk right here in his own home market. Between November, 1913, and August, 1914, Europe sent to this country 100,000 cases of tinned milk, most of it in the nature of "feelers" in our markets. Much of this was cut off by war; still neutral countries like Holland, Norway, Denmark, and Sweden have sent considerable canned milk to our markets the past few years, maintaining their brands as a basis for after-war business—which is good business.

Cost of raw milk to European manufacturers before the war was from one to sixty-one cents per hundred weight lower than the cost of raw milk to American manufacturers. The American condensers were then paying on the average of \$1.56 per hundredweight for raw whole milk, and taking 1,300,000 pounds of it yearly—a \$20,000,000 income for the American dairy cow. It cost American farmers from 23 to 48 cents to produce a pound of butterfat before the war. At the same time Australian creameries bought butterfat for 25 cents a pound, and exported something like 1,500,000 pounds of butter yearly to our Pacific coast. European condensers were able to get cheaper freight rates from their countries to New York than our freight rates from Illinois to New York in many cases. Welsh tin plate was quoted 25 cents a box cheaper

ships, and will be able to carry our own products, and perhaps work out combination railroad and ocean rates enabling us to export on a fair footing with other dairying nations which have been wise enough to maintain a merchant marine.

Should We Advertise?

For another thing, American evaporated milk has become widely known over the world during the war. We have had an opportunity to advertise it by letting people sample the product. American evaporated milk is better than foreign products preserved without sugar. It is nearer the real article as it comes from the cow than the sweetened condensed milk made abroad. Until war introduced our evaporated milk into England, people there knew only the sweetened kind. They spoke of "evaporated" milk, but meant powdered milk; and London dealers call our product "concentrated." The English demand has steadily increased, because people like the quality of American evaporated milk, and I believe that on this element of quality, due to excellent technical work by manufacturers, we can build a world trade. This should be an offset for lower costs abroad, to some extent.

Another thing to be taken into consideration is the opportunity to develop bigger consumption of evaporated milk in non-dairy countries like those of Central and South America. I do not believe that condensed milk, evaporated milk, powdered milk, and the like have ever been pushed there by characteristic American advertising methods, and I should like to see what

How I Make My Hogs, Cattle, and Sheep Pay Me Big Money

By Frank E. Drury

In an interview

TWO things always stand out in my mind when anyone asks me how my business of feeding live stock is getting along, and the reasons for my success down here at Jacksonville, Illinois. One of them is the answer of a banker to an inquiry as to how his farming business was making out; the other is the answer of a missionary to an inquiry as to how he was successful in teaching religion to Africans.

The banker's answer was: "As good as can be expected. Farming is a business, and it requires all of your time and attention." The missionary said: "If you want to teach Africans, think black. Then you meet them on a common level." Those, too, are my answers. When I

One can go broke as quickly in stock-feeding as in the stock market. It is on the same plan—both are a gamble. Striking a bad market with stock which cost too much in the first place, and too much to make them, will wipe out your year's work, and you will have to wait another year before you can attempt to regain any of your losses.

Of late years, in producing hogs, I have attempted to minimize my possibilities of losing, and now I believe I have reached a stage where the market doesn't bother me much. I mean I have bred a type of hog which can be marketed in good condition at 250 pounds, or held longer and go on gaining at a minimum cost, and still be in good condition.

the many things I have learned about hog nature. I build it in the fence between the pasture and the cornfield, and the pigs think they are putting one over on me when they slide into the cornfield, nip an ear, some rape or soy beans, and scoot back before I come around. You know who is being fooled.

I raise but one litter of pigs, and up to this year have kept over my sows. I have changed my plan, however, and now am using gilts. The reason for this is that maintenance costs are too high. It is a question now of producing pounds quickly, so I will market the sows and use gilts. I believe it will pay as long as hog prices are good and the cost of feed so high.

Another thing which caused me to change my sows is that I am endeavoring to breed a rangier type of hog, so that I can protect myself against market fluctuations. To that end I recently bought a brother to the grand champion Duroc-Jersey boar at the International, from H. M. Mumford of Ann Arbor, Michigan. This boar is Brookwater Special, a big, stretchy sire. I had three boars of the Colonel family of the same breed, and have some fine brood sows as the result.

I also have a Spotted Poland-China boar that I cross on some of the Durocs which are not of the Colonel family. This boar is very rangy and has plenty of bone. I also use him on some Poland-China sows which I have. The offspring makes a very good market hog.

Of course, aged sows make better mothers than gilts, but I think I can take a chance now in order to reduce the number of sows I am to carry. You see, while I am growing the gilts I keep for breeding I can be fattening the aged sows, thus enabling me to save feed, and get more money from the present prices. This saves time, because you have to feed the gilts anyhow, also the sows.

Some farmers think a hog should go to market when he is 225 to 250 pounds, regardless of the market. I differ from this thought, and have bred my stock to

get pigs I can feed to 400 pounds, or more, the market is good. As an example, some neighbors had the short, fat type of hogs, and fed them to 250 pounds. The market at the time was at the bottom of a two-months decline. Mine were rangy, and I kept feeding them for months longer, with the result that when I sold them the price had reached the stage it held before the decline.

Make the Right Goods—and They'll Sell

ELSEWHERE in this issue James H. Collins tells how many kinds of business man a farmer must be. Drury drives home the point. He shows us, from his own experience, how important it is to get the proper raw material—hogs, cattle, and sheep—and build them together in the right way, if we're going to turn out a finished product that will make us money. He is a fine example of a man who tends strictly to business and depends on the quality of his product to make him a profit. His farm is near Jacksonville, Illinois.

THE EDITOR.

until farrowing. Before pigging I fed some protein feeds to build up the fetus. After farrowing time I kept the ration, according to the condition of the forage pasture, until the sows were weaned, when I put the sows pasture entirely. The pigs also go to pasture, and have access to self-feeding corn, minerals, and tanks.

In the new way of handling I start the time gilts are ready for breeding, 400 pounds of pork to market instead of 200 pounds, as formerly was the case. You see, it is a question of pounds for this reason I expect to market the sows after weaning one litter. The profit on our gilts now is the equal of anything the farm at this date, and the litter age has been good.

My hog business is divided into several departments, which include weaning, which comes under the heading, instance, when it comes to risk, I am under this heading, segregation, and under this heading, vaccination. All these departments are of pigs and hogs, from rowing to marketing.

I generally keep about 150 sows, the results of farrowing over a season years have been litters averaging

seven to eight and one-half pigs. My plan of carrying over sows is still, in a measure, adapted to carrying gilts up to breeding time, and after that to weaning. If I should go back to the practice of carrying over sows it still will be usable.

To carry the sows along on rape and pasture after farrowing, feeding a little grain after breeding time, I usually have a field of 40 acres of corn and soy beans. By selecting this field adjacent to the breeding pens, and clearing the field in time, I have enough corn left and a luxuriant growth of juicy, palatable forage and protein feed, on which brood sows will start into the winter in thrifty condition. This green, rich forage at this time of the year, and just at breeding time, is a great asset to the general health of the sows, their bowels showing the same condition as when on grass in the summer. This condition of the system can only argue that all organs of the body will come more nearly performing their natural function.

This rape business is no myth, for it seems to last well into the winter, with heavy sleet and snows and ten-degrees-below-zero weather. The rape is generally green pasture for 150 sows until the middle of January.

The care of the boars through the breeding season and a definite plan of marking the sows, so that records may be kept for farrowing time, are important points.

Practically the only sure method is to stand the sire. For this purpose I have purchased a breeding crate, my Duroc boar being a monster. We can thus insure the continued strength of the sire by proper care, feed, and a limited amount of work. This enables us to keep absolute records, which, if properly carried out, will lessen responsibility and add to efficiency at farrowing time.

There is no time in the herdsman's experience when knowledge or judgment counts for more than when he must select the sows which are about ready to farrow, and must be cared for first. A few sows guessed wrong at farrowing time would soon pay for a little effort spent at breeding time in keeping gestation records.

The Way to Get Ahead

THE prudent, penniless beginner in the world labors for wages for a while, saves a surplus with which to buy land or tools for himself, then labors for himself another while, and at length hires another new beginner to help him. This is the just and generous and prosperous system which opens the way to all, gives hope to all, and consequent energy and progress and improvement of condition to all.

—Abraham Lincoln.

I have box stalls for each boar, allowing the sows freedom of the adjoining shed-room, which is gated in such a manner as to make it easy, separately, to hold each sow that fails to go to the rape pasture. This also gives me the choice of the boar to use.

The breeding herd being immune, it can be kept for several years to good advantage. Unless one is very sure of the immunity of the younger sows, the plan to follow is to hold the immune stock until immunity is thoroughly established in the younger generation, be it nine months or nine years.

Now as to feeding prior to farrowing time, and the feed calculated to develop the pig: feeding a little light on corn, a good balance of protein, either of tankage or alfalfa, with plenty of exercise, and you arrive at farrowing time in pretty good shape.

My plan at farrowing time is mainly the use of a central hog house, which we use the remainder of the year as a feeder shed, sleeping quarters, and wagon shed. I use a system of gates six and seven feet long, which, when put together with baling wire, the "farmer's friend," make a stall six by seven feet. This row of pens leaves a nice alley-way for handling sows. The pens are easily moved and, being on a concrete floor, can be cleaned and disinfected and used again for general sleeping quarters.

When ready to move to grass I use a small sled, four feet wide and eight feet long, with solid ends and gates wired on sides, holding two sows and their litters nicely.

Selecting litters of the same age, I take them marked, castrated, and dipped to the grass, placing them in portable hog houses located in as many different places as is possible, and confining them there sufficient time to overcome the homing instinct of young pigs, which is very strong. Whole litters of pigs have been known to leave these houses and go back to their birthplace, to starve and die. That is why I confine them until they become accustomed to their new quarters. A little over a day generally accomplishes

this result, and the sled on which the pigs were hauled is used to carry water to them while confined.

This segregation as to age and number for a few weeks is, to my mind, very important. I make my portable houses seven by fourteen feet, divided by movable gates in the center, for use at farrowing time when necessary or convenient. Each house holds four sows and litters after farrowing. Houses are two and one-half feet high at the back, and five feet in front, with a hinged door to let down at top in the front, so as to admit plenty of sunlight. I also have a hinged door at the bottom. Houses so made are easy to move, and have good ventilation for summer shed-room.

The central hog houses have concrete floors sloped to take the moisture from the

some tankage, and mill feed of what we raise—wheat, rye, oats, etc.—ground at home. I gradually increase the corn and tankage to a full feed. A little later I fix a creep to a self-feeder of each, and ration the sows according to the condition of the pasture.

The pigs have come to grass free from lice, and to keep them so and to prevent handling, dipping, etc., which we consider loses at least a day's feed, if not some hogs, either killed or crippled, I fix a bath of crude oil in a sand bed or in some shed or shady place for them to wallow in. They do the rest, waiting in turn, it seems, they like it so well. A wooden barrel of crude oil left in the sand soon leaks just enough between the staves to make an excellent patent oiler, and has the advantage of holding enough to last quite a while.

By this method of feeding and segregation it makes it convenient to carry these pigs with the colony idea while on grass. At all times I keep before them self-feeders of a mineral mixture of slaked coal, lime-sulphur, copperas, and salt in the best possible proportion. I also use some lime and copperas in the water tanks, which are always filled and are non-freezing.

When every pig is of good size, and about ready to hustle for himself, I wean them. It may not be advisable to wean all of the pigs at this time, but the time has come when they must be immunized from cholera. If handled properly up to this time, disease is not liable to break out in the herd, and it is possible to protect against risk of cholera by vaccination. I believe in

A big man physically, as well as in a stock-farming way

bedding. When penning the sows at farrowing time it is a good idea to spray with dip or crude oil, to dispose of any lice that may bother the pigs.

After pigs have been moved to grass, and arranged according to size and age, I feed them very light on corn for a few weeks. The mothers have a slop during farrowing time of about one-third corn,

giving a heavy dose and in double treating. I believe that the effectiveness of production depends largely on the amount of lost motion; and superfluous use of feed or time can be considered as lost motion at this moment. In an effort to reduce waste to a minimum I make liberal use of protein supplements along with corn. And because of [CONTINUED ON PAGE 40]



Drury and Brookwater Special, his big, stretchy sire

raise hogs I think hogs—not pork. Thinking in the finished product is not the way to do. Think in the nature and habits of the animals. That gets the best results. This also applies to cattle and sheep. In raising live stock you must be a stickler for details—they count heavily. And you must love the work.

Whether the brains of live stock are good for anything but eating, I don't know. Moreover, I don't know if the thinking apparatus of cattle, hogs, and sheep really function; but I believe in animal psychology. If the brains of the beast do not function, they do possess a wonderful instinct, and, like man, are addicted to habits.

It took me years to develop my hog business; but I have reached a point where I can market a 350-pound hog in ten months, with a minimum amount of time, labor, risk, and feed. To do this I had to learn a lot about swine. I have learned that a hog is somewhat like a human—that stolen sweets are tastiest. I have also learned that a hog is not a hog in the respect that some humans are compared to when they gorge themselves with food or drink; and I have learned that a pig loves its birthplace.

Pork on my farm is made automatically—with the aid of a self-feeder, a field of corn, and a little slip gate from the pasture to the cornfield. This slip gate is one of



This is a panoramic view of part of the "meat factory" with which Drury has built his fortune

CHÂTEAU-THIERRY



W. J. AYLWARD was one of the American painters who went over with Pershing to paint doughboys in action against the Huns. He caught this lad—a sniper—on the wall of a shell-wrecked building in Château-Thierry. The lad picked off the Fritzes as they ran forward to attack, while Aylward, unarmed, stood by and sketched him. All right, Aylward—good work! But excuse us from going to war with a lead pencil.

BURIED beneath this ruined church in the war-swept valley of the Marne is a first-aid dressing station. It is to this that these American wounded are going after doing their utmost to drive the Hun back from the gates of Paris. Not very cheerful—was it?—for the boys to stumble through a graveyard to the doctor! Especially when you consider that there were even less pleasant sights around than appear in George Harding's painting of it. Some of those high-explosive shells disturbed even the slumbers of the long dead, unburying them and hurling them into near-by fields. But the doughboys didn't mind. So long as they kept two legs under them and could go at all, they were happy.



BY THE light of a candle on an old kitchen table in this gloomy wine cellar near the outskirts of Château-Thierry, French and American officers planned the battle that broke the German back at the Marne. The men you see in the group have been on duty, without rest, days and nights on end. What they had of food and drink was brought to them; and when their vigil exhausted one of them to the point of collapse he slept where he sat, awaking to go to work again right where he was. That's the kind of a job it was at Château-Thierry. But it got results, and that's all they were after. George Harding was the painter of this scene also.

Getting Six Per Cent from Your Tractor

An authorized interview with Major Oliver B. Zimmerman, U. S. A. Engineers, a world authority on tractor design and internal combustion engines

By William Harper Dean

I ONCE read an article by a breeder of Jersey cattle in which this man was giving advice to farmers who were honestly striving to improve their herds. And this is what he said:

"Hang over your desk the picture of a truly typical Jersey. Look at this picture every day until you can shut your eyes and see it in complete detail. Then go look at your own animals and note their shortcomings. Go on with your work of herd-building until every animal you own looks to you as good or even better than that picture."

"That's sound advice. Success in any undertaking comes from the dogged pursuit of an ideal. If I had to use this same idea for the benefit of tractor operators who honestly want to extract from their machines the last decimal of efficiency and the utmost rate of interest on their investments, I think I should put it this way:

"Hang over your desk a diagram of your tractor with every part labeled and with the function of each part clearly explained. Look at this, study it until the logic of every bolt's and nut's position is as plain as a pikestaff. Study the diagram until you can shut your eyes and see it. Then go out and study your tractor. And every day you run it do so with the determination to make every nut and bolt, every valve and shaft, perform up to the ideals of the engineer who labored to design and place them just as they are in your tractor. Do this every tractor day, and efficiency, interest on investment, and life of the machine will take care of themselves."

This is how Major Oliver B. Zimmerman, U. S. A. Engineers, answered my question, "How can tractor operators get six per cent or better from their machines?"

How They Are Designed

Major Zimmerman is signally qualified to offer tractor advice. For seven years preceding his connection with the army he was advisory engineer to one of the largest tractor-manufacturing concerns in the world. His entire life has been devoted to engineering problems. He has made tractor tests under every conceivable condition all over Europe as well as in Africa; he has conducted research and experimental work in tractor fuels in London, Paris, Berlin, Budapest, Odessa, and Bucharest. To-day he is one of the foremost American authorities on internal combustion engines. His consuming ambition always has been to improve, *improve*, engines and fuels alike.

"If a tractor operator will follow this simple scheme," continued Major Zimmerman, "it will not be long until he has geared his mind to mesh with that of the engineer who designed the tractor. He will begin to understand why this or that bearing is just so large and why the analysis of its metal is what it is, why the air intake is placed just so. And as soon as he gets into this frame of mind he is going to converse with his tractor in its own language, and draw out the very limit of its efficiency."

"The best tractors on the market to-day have been designed to meet average conditions and average intelligence of operators. Make 'A' will be sold in Turkey, say. The average Turk will get a certain efficiency from it; the same tractor driven by a Mouzik on a Russian steppe will perform differently. But by reducing to a minimum the number of movable parts—that is, the parts which need adjustment by the operator—the modern farm tractor stands as a product striking a happy mean between wide extremes of operating conditions, yet quickly responsive to careful, intelligent handling."

"Let's follow that idea of studying a diagram of a tractor and seeing *why* parts are so designed and put together as we find them in the stock machine."

"Here's the air intake on a particular tractor which, as happens, I've done a lot of work on from the designer's angle. The intake is some seven feet above ground, sticking right through the roof of the driver's cab. Why there instead of underneath? Not to make the machine have a racy look, I assure you. It's there because

it was up to me to put it there if the tractor was to be a success.

"One year we had reports of thirty or more of this type of tractor lying out of commission in a certain section of Illinois. The 'fix-it' men would go from our plant, look over the machines, put in new bearings and the like, and leave. But that sort of thing kept up too long. I went out to those machines to see what the real trouble was. I opened crank cases and took out handfuls

"Why, that particular make of tractor which broke down in Illinois was sucking just 46,000 cubic feet of dust-filled air into its lungs every ten-hour day! Without straining this air, you can imagine how long it would take for such an engine to cut itself out. The operator who reasons this out will never let the air filter clog or get out of adjustment. He knows it isn't on the tractor just as an ornament."

"I remember when I covered this and a

though the prize was a toss-up between our machine and the German product. I wasn't so much concerned about capturing the trophy for the American tractor as I was to have the Germans admit that, though their machine to all intents and purposes was just as good as the American, yet its design was full of holes."

"So I took a sheaf of notes and experimental data with me and called on the professor from the University of Berlin, who was the man to pass final judgment. I found him unreservedly committed to the German tractor. But I sat down with him and point by point we took up the relative merits of the two."

"I asked him which part of any tractor gets the greatest strain and wear. He promptly answered the rear axle bearings. Then I showed him that the area of these in the American machine were greater than the German's, that they provided for better lubrication, a greater margin of safety, and guaranteed longer life of the machine. The vital lubrication points were taken care of by larger cups on the American than on the German tractor. The German machine was rated 60 horsepower, so was the American; but the latter actually delivered more in excess of this rating than did the German. The analyses of the material used in our tractor showed that the German had nothing on us there. And so it went, point by point. The German professor was fair enough finally to admit that America had produced the better tractor."

"That's just the sort of thing I like to see done by salesmen—to take up point after point in design and construction and show why these make for economy and efficiency. No man can sell tractors intelligently until he knows something about machine design; no man can buy and operate intelligently until he can look at his machine with an understanding of what was back in the engineer's head when he designed it. For this very reason I worked out a series of simple tractor lectures for delivering to salesmen and anyone else who cared to listen. Some of the points I am giving you I used in those lectures. I couldn't give you anything better, for they're basic."

Friction Eats Up Power

"The man who operates a tractor needs to keep in mind constantly the fact that, starting with a certain initial horsepower generated by the engine, what is actually delivered at the drawbar for real work depends not merely on the rated drawbar horsepower, but on how well he takes care of his tractor to cut down losses of power between engine and drawbar."

"There are losses of power all along the line between engine and drawbar. Early in the tractor game our best American machines did well to deliver 50 per cent of the power generated by the motor. Better bearings, better lubrication, better types of gears, and other improvements have now raised this figure until our best machines can deliver up to as high as 83 per cent of this initial power."

"Friction absorbs no small percentage of this loss between engine and drawbar. So even with the best possible material and design in bearings this loss can be tremendous if the operator slights lubrication. If he tries to 'economize' by using cheap oils and greases which break down under high temperatures, this loss will many times over absorb this 'economy.' Or if his oil is running low or his grease cups need refilling, instead of stopping the tractor at once and attending to this he takes a couple of turns about the field, he may pay dearly for the hour or so he thinks he has gained. In that time the bearings may be so worn as to prove a constant menace to the hold-up qualities of his tractor, to say nothing of the loss of power they cause through waste motion."

"How vital a thing is careful lubrication and frequent inspection of parts to see that they are tight and functioning properly can be made perfectly clear by a few simple facts and figures which are not so technical as they are common sense."

"Here's a [CONTINUED ON PAGE 18]



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Do You Just Ride a Tractor— or Do You Operate It?

IF THE driver is versed in the language of his tractor—as he must be to succeed with it—he'll recognize its voice of protest and reduce the load. If not, he'll keep right on punishing his machine until something wears, loosens, and eventually goes smash.

"You have five senses—seeing, hearing, smelling, feeling, and tasting. You have use for most of them when operating a tractor." [That's what Zimmerman says.]

of oil muck—oil and grit mixed in vicious proportions, enough to cut to ruination the finest bearings ever made. The cylinders were scored, valves clogged; those tractors were dirty inside, good and plenty. And that's what lay at the bottom of all the trouble.

"Then I began to ask questions. The machines had broken down during harrowing season. The season was a very dry one. Dust had been sucked into the engines to cut the very life out of them. That was the whole story."

"So I went back and got down to correcting this trouble in the designing-rooms. Instead of locating the air intake under the body of the tractor, where it could suck up pounds of dust, we put it above. Other concerns were having the same trouble, and other concerns as well as our own went to work and equipped their tractors with air filters. I'm confident that no good tractor on the market to-day is without such a device."

score of other points in tractor design to prove to a German professor of engineering that the American tractor was a better product than the German's. Incidentally, these were the very points which I have insisted must be put squarely before tractor salesmen and tractor buyers to stimulate sales and to assure intelligent operation of every machine sold.

"The occasion was a field trial of tractors held at Magdeburg, Germany, in the spring of 1914. I've taken a hand in a good many trials here and abroad, but this particular one was the most rigid I ever ran against. The trials required the entries to operate for 30 days of 10 hours each. Some thirty-odd American and German makes were entered. On the final day of the trials there were just two machines which had lived through them and were still going strong."

"One was a German product; the other was an American, over the design of which I had worked long and hard. It looked as

Why Tenant Farming is Bad Business

It tends to put a man in a shiftless frame of mind that costs him money instead of making it for him

By Edwin Baird

I WAS born on a farm, grew up on a farm, and got married on a farm. And when my father asked me where I intended to live with my wife, I answered without a moment's hesitation:

"On a farm."

That was thirty-odd years ago. I hadn't enough money to buy a farm then—only a few hundred dollars, saved from the small wages my father paid me—so my wife and I decided to rent.

We heard of a farm, about six miles west of my father's home, that seemed to be what we were looking for; and the next Sunday—a cold, bright day in March—we drove out to look it over.

It proved to be a dismal-looking old homestead in a depressing state of decay. From the rotting front gate, which hung by one hinge from the post, to the unpainted barn, with its missing boards and broken cupola, the entire estate was in terrible need of repair—and was exactly what we didn't want in almost every way.

However, the low rental suited us, and, as it was the only place we'd found that did, we leased it for a year.

It was a 160-acre farm, and the owner (who had given it up and moved to town when his wife died, several years before) had generally planted it to corn and oats. He told me he'd tried wheat and barley one season, but found the other grains gave a better yield.

From my father I borrowed money equal to the amount I had, and bought ten head of cattle (you could buy cattle then for one fourth what they cost now), and some hogs, geese, and chickens, as well as what farming implements we needed. During the first few weeks I was too busy getting my crops in to bother very much about the shoddy condition of the house and outbuildings, and yet I couldn't help but notice how slovenly and disreputable the whole place was—fences dilapidated, cowshed falling to pieces, doors and windows loosening, and weeds everywhere.

All this, as I found out later, exerted an unwholesome influence on my mind—and on the mind of my wife also—without our exactly knowing it at the time.

I Was Tempted to Give Up

My father had half agreed to help me out, in case I got in a hole—and the hole I dug for myself that first year was the deepest I've ever known in my life. My crops were almost an absolute failure, the protracted drought had parched the pasture so that the cows gave little milk, and I lost six hogs from cholera. Altogether, I was a pretty discouraged man at the end of that season, and I was plumb disgusted with farming, specifically and in general.

But my wife became the mother of a son, around the middle of October, and our joy over this new arrival almost made us forget the troubles which were surrounding us on every side.

When we did get back to these troubles again we felt tempted to give up farming entirely and move to the city.

Our landlord, when we told him that, put up a strong argument against it. He'd had considerable trouble, it seemed, in keeping his place rented, and he didn't want to lose us. Finally he said if we'd pay the taxes on the property and occasionally send him some fresh eggs and veg-

etables, he'd let us have the whole shebang rent free.

Even that proposition—attractive though it seems on paper—didn't especially appeal to us. Our year of failure on that farm had soured us.

But we gave up the idea of going to the city, and began talking of moving to another State, several hundred miles away, where, according to all we'd read and heard, the land overflowed with milk and honey. A farmer's paradise, if you've ever noticed, is always in some part of the country where you don't happen to be.

Finally we gave up that idea too. We decided to stay where we were—for one more year, anyway.

We've never ceased to be thankful that we made that decision. True, we didn't come out much ahead, but at least we did considerably better than we had the first year, and that encouraged us to keep on. The knowledge that we hadn't given up strengthened us, too.

So we started on our third year, with hope running high and with my wife looking forward, once again, to motherhood. The baby came the following spring—a girl this time—and my wife and I were not unhappy. We were both under thirty, we were blessed with good health, and we were looking forward to long life and prosperity.

This last didn't come very readily, but we managed to make a decent living from the farm, and we never failed to add, periodically, to our "home fund." This fund, when sufficiently large, was to be used in buying a farm of our own.



The boy and I planned the farm work together

When He Quit Being Shiftless

"UPWARD of eleven years have passed since I quit my makeshift tenant-farming habits. I've gradually weeded out all my old stock until now I have nothing but pure-breds. I will do without a thing now rather than use a makeshift, and I pride myself on the fact that there's not a broken

fence on my estate, and not a thing that's in need of repair. There is no wiser saying than, 'Nothing succeeds like success.' Knowing that my farm is considered one of the most successful in this part of the country, I am always trying to make it more and more successful."

The owner, as soon as he found we were making money on his land, returned to the original basis of rent—which, of course, was only just. But it pared our profits considerably, and put our dreams of a home of our own just that much farther away.

Our standard of living, contrasted with the manner in which the average farm family lives to-day, was pretty low. In those days farmers lived crudely, and went without many small comforts which to-day are considered necessities.

For my part, I saw nothing wrong in living that way—probably because I'd been doing it all my life. But a new era was dawning, times were changing, and I was destined to change with them.

I ran my rented farm for four years, and at the end of that time I had enough money laid by to make a substantial payment on a farm of our own. In buying it I had to assume a first and second mortgage, both bearing six per cent interest, but that didn't worry me. Such was my self-confidence that I felt able to cope with anything.

Meanwhile the place we'd called our home for four long years was looking even shabbier than when we first found it. Being a renter, I couldn't get enthusiastic about keeping it in repair. Renters seldom have much enthusiasm. That is why my place was known as the most dilapidated farm in that part of the State.

Somehow, I didn't resent this as I should have done. I comforted myself with the thought that it wasn't my farm, and that I wasn't responsible for how it looked.

I can realize now, if I couldn't then, how misguided I was. My being content with slovenly surroundings, putting up with all sorts of makeshifts, and feeling indifferent to general appearances, became an unfortunate habit, which stuck to me, as habits will, after I'd bought a place of my own.

This farm that I bought had about 150 acres of good fertile soil, but it had been vacant all winter, and the owner, and particularly his tenants, who had occupied it till fall, had neglected it shamefully. So it really wasn't much of an improvement on the place I was leaving.

I made up my mind I would fix all that; and, indeed, in my new joy of ownership, I did make many needed repairs, and planned thrice as many more. My wife and I often sat up late at night—when I should have been in bed resting against the next day's toil—planning new ways to make our home gladden our eyes as well as our pocketbook.

But all that passed like a fever—and it was a sort of fever, I guess—and the next thing I knew I'd slipped back into the same old happy-go-lucky rut, not caring much how things looked, so long as I managed to make a living.

I failed to carry out even a small percentage of the improvements I'd planned for the farm, and the sight of a broken window pane or a loose hinge on the barn door no longer filled me with a desire to repair the damage forthwith. I reduced repairs to a minimum or neglected them altogether.

I wouldn't fix a hole in the roof, for instance, until the roof began to leak; and the only time I mended a fence was when the cows got into a cornfield. I fell into the habit—the easiest habit of all for a farmer—of being satisfied with makeshifts, instead of spending a little

time and trouble in constructing durable, permanent things.

For instance, the only shelter I provided for my buggy and wagon was a lean-to built against a side of the barn from a few old boards of various sizes, and some strips of sheet iron. It was a crazy looking, rickety affair, offering only slight protection against the snow and rain, and it was typical of the many makeshifts that were on the farm when I bought it, and which I made no effort to replace with lasting structures.

So I went along in a sort of jog-trot, no better and no worse off than other farmers all around us, and never getting anywhere in a material way. I managed to make a tolerable living, and that was all.

The First Step Forward

The trouble with me was that I had started wrong. I made the mistake of renting a farm instead of buying one, and the farmer who rents is almost sure to fall into a slovenly way of running his business. He gets the wrong viewpoint. And that was my main difficulty; my mental attitude wasn't right.

Then, several years later, something happened which swept all that away, and my method of running a farm was completely changed—overnight, you might say.

One hot Sunday morning in July, Henry Whipple, who had created a sensation the previous spring by paying five dollars for a setting of White Plymouth Rocks, drove past my house with [CONTINUED ON PAGE 34]

For Half the Troubles in the World, This is the Best Prescription

By Bruce Barton

FOLKS are lots more interesting to me than what they do or say. Take Mrs. Robert Browning, for instance. As a poet she bores me except for a few poems. I find the rest too hard to understand. But as a human being, and a wife, she is very interesting.

I was reading yesterday the story of her courtship. Emerson told the tale to Edward Everett Hale; and it is recorded in the Life of Dr. Hale by his son.

"Emerson was here to-day," writes Dr. Hale to his mother, "and told me the details of Robert Browning marrying Miss Barrett."

"She was an invalid—never left her bed—her father a jealous old man who let no one see her. Browning and she had complimented each other in print but never met."

"How can I see Miss Barrett?" he cried in Carlyle's parlor one day.

"And Mrs. Carlyle answered: 'You can't see her at all,' giving reasons as above."

"At which he took his cane, went to the house, asked for Miss Barrett, and by the blunder of a servant, who thought him a doctor, was admitted to her bedroom."

"She had not moved for three months—was bedridden: but at the end of the first visit she lifted her head in bidding him come again; the second time she sat up; the third, stood; and closed the fourth by eloping with him to Italy, where they now are—her cure being a complete one."

So they lived together through life, loving each other, and doing their work. She, never quite really strong, but able still to go ahead, borne up and carried forward by the power of her love.

Had Robert Browning never found her, the chances are she would have continued a bedridden invalid, and died young.

There is a law in physics to the effect that "two bodies cannot occupy the same space at the same time."

The same law applies in the mental world. Two thoughts cannot occupy the same mind at the same time. The lesser thought gives way inevitably to the stronger.

I knew a woman once who, like Elizabeth Barrett, had stayed in bed for years. She was fully convinced that she would never walk again; and she had succeeded in convincing everyone else around her.

One day, when she was alone in the house, it caught fire. And before she realized it she had jumped out of bed, dressed herself, and made off down the road.

Her fear of fire had banished her fear of exertion. For the first time in years she was lifted out of herself by the power of a great emotion—and that was all she needed to be well.

The war has been a great curative agent for lots of people.

Men who never had a thought except their business and their indigestion have forgotten themselves in the new-found joy of doing something for their country.

Women who have "enjoyed poor health" for years have spent their days working for the Red Cross and the Y. M. C. A., and are amazed to discover how much vitality and working power has been concealed within them.

Said wise old Sam Johnson: "I think there is some reason for questioning whether the body and mind are not so proportioned that the one can bear all which can be inflicted on the other; whether virtue cannot stand its ground as long as life; whether a soul well principled will not be sooner separated than subdued."

He had bad health most of his life; and his medicine was work, as Elizabeth Browning's was love.

For half the troubles in the world this is the best prescription:

Fall in love like Elizabeth Browning, or work like Sam Johnson, and lose the petty thinking of yourself in the great passion for something or someone else.

Roadside Advertising Really Pays

By E. I. Farrington

WHATEVER else may be said for the automobile, it has helped many farmers get better prices for their truck and produce. This fact has been especially appreciated since labor has been hard to get and shipping facilities have been generally upset.

There are sections where practically all the small fruit, apples, pears, and vegetables have been sold at the door. The writer knows one man whose sales on a Saturday have run to almost \$50. This was in early summer, when peas and beans were in great demand. In the fall, orders for apples and other products to be used during the winter have amounted to more than \$50 a day. A woman who has been raising berries in a small town put an advertising sign at her gate and disposed of her crop, \$500 worth, mostly raspberries and strawberries.

When this movement began, almost any kind of sign was sufficient to attract customers. Now competition is becoming keener. There are sections where goods are displayed at almost every farmhouse gate for miles, or, if no goods are shown, a sign advertising them is seen. Buyers are more discriminating than they were.

To get trade the farmer must be businesslike, careful as to quality, and enterprising in his methods. A blackboard on which the day's offerings are quoted is fairly satisfactory, if it can be arranged to meet the eye of the automobile driver as he comes up the street. Signs that face the road are often overlooked. Probably the best way is to use two signs, setting them back to back at the side of the road in the shape of a tent. Then they can hardly escape motor drivers from both directions.

An easy sign to use is one consisting of a frame into which panels may be slipped. If one has a set of panels bearing the names of all the articles offered for sale during the season, it is only necessary to slip into place the panel advertising those on hand each morning. One farmer on a state

highway has made an extra bid for trade by erecting a large, bulletin board of this type, with a conspicuous weathercock at the top. The wooden rooster, turning with the wind, is pretty sure to catch the eyes of those who pass. Another farmer has evolved an even more original sign. He specializes in poultry products, and has hung a broad board over the street in front of his house, this board having an imitation hen's nest fastened to it, with real eggs that have been blown fastened to the board higher up. The effect is that of a hen's nest heaped with eggs. It is most ingenious.

In Franklin County, Kansas, Frank Pyle has been advertising apple juice with a big sign in front of the house. This beverage can be handled very profitably at the door. Even cider mills are now putting out advertising signs to catch the eyes of passers.

There are ways of using advertising signs which are sometimes overlooked. While they serve to bring trade for roasters, eggs, broilers, vegetables, and fruit, there is no reason why they shouldn't also attract customers for cheese, jelly, piccalilli, jam, or even puppies.

Of course, selling at the door involves more or less work, depending on the amount of custom. The farmer who raises only a few crops in large amounts will prefer shipping in the regular way. It is when one has a miscellaneous lot of products to dispose of that roadside selling becomes most desirable. Then the good wife or daughter must help with the work. They must know how to make change quickly, and must have a pleasant way of

meeting people. Sometimes people to whom casual sales are made come to be regular customers to whom shipments can be made the year round. It pays to have some circulars printed to be given out at the roadside stands, especially if one wishes to build up a parcel-post business.



This sells the goods

This is just one form of advertising, perhaps the simplest of all. There is no reason why the farmer should not use the newspapers and the mails. The writer receives regularly the announcements of a farmer north of Chicago who produces a large amount of honey. This man finds he can make more money by selling his honey to a retail trade in 12-pound cans or larger than by selling wholesale. He has a long list of names which he circularizes each year, cutting them off when no response is received for a certain length of time. He started his list and keeps it fresh by advertising in one or two Chicago papers. This method is not expensive, for only a small, clean-cut advertisement is used. Moreover, it gets excellent results.

Advertising in newspapers is sometimes pronounced a failure by farmers who have tried it. The explanation is usually easy when one reads the ads of these men. Merely filling up space is not really advertising. To sell goods by mail you must give a little thought to the subject. It stands to reason that the prospective customer does not want to enter into any prolonged correspondence. The best advertising is that which tells the whole story, so that no return letter is necessary. Your advertisement should go straight to

the subject, and tell the story completely in as few words as possible.

Take an advertisement like this, for example:

A No. 1 Jonathan apples for sale.
\$5.00 a barrel. Delivered at your door in three days.

That tells all the customer wants to know. If he wants a barrel of Jonathan apples and doesn't consider the price too high, he will mail you a check immediately. You will perhaps write him a note of acknowledgment, and will put his name on your books for future circulars. On the other hand, you will get little results from an advertisement which reads:

Apples for sale. Write to the undersigned for prices.

The first ad will bring ten answers to one from the other.

Every farmer who undertakes work of this kind should use a typewriter. The average man dislikes to puzzle out a pen scrawl. A typewritten letter makes a good impression, which is half the battle. A printed letterhead giving your full name and address looks businesslike too. This may seem like too much attention to details, but the experience of many points to the fact that it pays, and pays well.

The question of prices is one over which there has been much disagreement, even among farmers. Some of the latter believe goods sold at the door should bring retail prices. They claim that it requires more time to sell in this way than to pack and ship. They point out, too, that some member of the family must be ready at all times to wait on customers, thus neglecting some other duty. Prices charged should not be wholesale prices by any means. Yet it is best to have them a little lower than those charged by the best city stores. In this way the farmers obtain an increased profit for themselves, and yet encourage people from the city to visit their farms.

Making the Farmhand Stick to His Job

If you put the right man in the right place, treat him right, and let him know you depend on him, he'll stay

By Seline Hess

You Can't Be the Whole Show Even if You Do Own It

THE man who wants to do everything himself will always find plenty of people willing to let him try it. But he'll fail. The world isn't built that way. When a job gets too big for one set of hands and brains, it has to be split up. Foch recognized this when he was placed in command of the allied armies. Up to that time the English commander was trying to lick the German's almost independent of the French, while the French commander was hammering away according to his own ideas. Foch changed that. He outlined the idea, and let each allied commander know that he depended on him to do his share. And before long the whole army of "square heads" were bellowing "Kamerad!"

Now apply that to your own farm. Give your helper your *ideas* and put it up to him to work them out. Don't badger him. Don't try to watch every move he makes. That's too much like trying to take in a three-ringed circus—there's too much to see and you're bound to miss a lot, anyhow. Your man will appreciate such treatment. It will make him that much more anxious to make good—and to stick. THE EDITOR.



Mrs. Shepard in working togs

THIS is the very interesting story of how Jack London's sister, Mrs. Eliza Shepard of Glen Ellen, California, took the novelist's "play farm" away from him, and by hard-headed business methods put it on a paying basis as a first-class stock farm in the Valley of the Moon, Sonoma County, California.

But that is not the *important* thing about the article. What most interests us as farmers is what Mrs. Shepard has learned about the labor problem. She believes every farmer can do a lot to solve his labor troubles by studying his men and having a definite policy in handling them. What she says may have a hint in it for some of the rest of us, and we pass it along to you for what it is worth.

Jack London himself, though he was a story writer and not a farmer, always had the interest of the workers at heart. He reflected this in his books. He believed that the employer ought to try to see the situation from the employee's angle as well as from his own angle. He maintained, with Mrs. Shepard, that the housing of workers on farms and ranches in this twentieth century does not mean just a shack with no comforts or conveniences, but a decent, modern place in which to live.

The London ranch employs twenty-nine men the year around, and Mrs. Shepard's years of experience with this staff certainly gives her some authority to speak on the help problem. London himself is dead, and his greatest monument is the good books he wrote and left behind him for all of us to read, but the treatment he and his sister accorded the men who worked for them has had no small part in making the 1,300-acre ranch a paying investment for Mrs. London, who, with Mrs. Shepard, now keeps the business going.

Had it not been for the fine qualities with which Mrs. Shepard is blessed, and which every farmer should have, she would not have made the ranch the success it has proved. She radiates the spirit of kind-

ness, patience, justice, and truthfulness, as well as thrift and industry. Optimism is a dominating factor in her life.

"I feel as though I have the help difficulties well under control," said Mrs. Shepard. "It has been my experience that the best thing to do is to keep your men under observation, and after you have studied their ways and abilities place them in a position wherein they will give the greatest service."

Square Pegs for Square Holes

"Always place a stockman in the stockyard and a plowman at the plow. Remember that one active, intelligent man with *your interest at heart* is worth more than five men who are simply putting in nine hours a day with their main object as pay-day. Never put a man in your stockyard who has no personal interest in it. Just because you hire a laborer you must not expect him to perform all branches of ranch work."

"Place a man over a certain branch of work, rather than have a foreman over all. If a man finds that you depend on him to do certain work, he will show more pride and responsibility in his duties. If there is a foreman, all mistakes rest upon him."

"My work as manager of the ranch has never been drudgery. I have never lost my 'pep,' as I have always had the loyalty and co-operation of my men, who have in turn been treated right by me. One must always remember after having secured a good man that he is just as human as you are, and that he should be well paid, well fed and housed. In other words, live up to the golden rule, 'Do unto others as you would have others do unto you,' and you will get results."

"I always plan my work the night before, and have it thoroughly understood and scheduled before I give my instructions to the farmhands, who simply go about their business the next day without further parley. They know exactly what

is expected of them. It is only in case of something unforeseen happening that I change my plans, and in that instance I am always on deck to line up the work to meet the changed conditions."

"It is not an easy matter to manage a force of men if you are not well acquainted with the work that each is called upon to perform. For that reason Mr. London always insisted that I should understand everything about the running of the ranch, from the milking of the cows to the plowing of the fields. He said it was cheaper to pay for our experience than to pay for the experience of each new man. Never try to set a man to work to do a thing that you do not understand the doing of yourself."

"One must always be prepared for emergencies on a ranch. Last summer when Uncle Sam drew his quota of ten boys, including my only son, from my ranch, I was somewhat bewildered to know exactly where to turn for help. I found a ready response from women, who lightened my burden at the crucial moment, and they stayed with me throughout the season."

"What you must know to be a successful farmer is the cost of every ton of hay stored in your barn, of every building erected, and of every mile of fencing; also the cost of producing every head of stock on the ranch. You've got to know costs to know profits."

"Start on a small scale; let the farm grow as you grow. Don't think that you can rent a farm and start making money at once. This is a mistaken idea that many farm-folk have. You must keep books the year round in order to know exactly what it has cost you to produce every pound of pork, every calf, and every colt sold off the ranch. There must be system in your ranch work."

"One of the first things in starting out is to see that you have comfortable quarters for your help; good, clean barns for your stock and, above all, a comfortable, homelike house for your headquarters. Keep the ranch machinery in a storehouse; keep everything sanitary. Do not have all kinds of odds and ends lying around. Give the place a wholesome appearance of prosperity and meet visitors with a smile and a pleasant word. Create an atmosphere of thrift and good cheer. This is the main secret of success on a ranch."

When Jack London bought the ranch he had the idea of making a eucalyptus grove and sort of country home out of it; but when Mrs. Shepard saw the fields being planted with eucalyptus trees she asked London why he didn't start a stock farm, planting hay and feed for the stock instead of spoiling the natural beauty of the place by planting trees. He replied:

"I have no time to manage a farm—if you will come and manage it I'll start a stock farm."

Mrs. Shepard was residing at Oakland, California, had just completed building a new home, was practicing before the Department of the Interior as a partner of the firm of J. H. Shepard and Company, pension attorneys, but she rented her home, packed her bag, and went to the ranch, where she has been its manager for the past eight years.

Mrs. Shepard became superintendent and manager of the estate. Every penny that went through her hands was carefully accounted for. She is entirely responsible for everything on the ranch.

Sometimes late at night Mrs. Shepard may be seen in her office headquarters, studying over her books and planning improvements. She is a little woman, but she has done a big work.

When she took the job she had no time to attend an agricultural college. The ranch needed her immediate attention, but she could and did study agricultural works in books and at first hand—all this during leisure hours. During the day she directed the work of reconstructing the wrecked

buildings on the ranch, with which the earthquake of 1906 played havoc.

At the time they settled in the Valley of the Moon there were no buildings in which to house either man or beast; no fences; no roads. About all they had was scenery and climate, but they could neither feed nor house stock with that.

It was not very long before the place was made habitable, and the big problem of housing the laborers and stock was overcome. A model pigpen of rock and cement was erected. Two 91-ton silos, made of cement blocks, were also constructed. They built all the roads on the ranch; got a rock crusher, ground all their own rock, equipped themselves with all the road machinery, and in a few months had first-class roads all over the ranch. Just a short time before the death of Jack London, which occurred two years ago, they made ten- and four-inch tiling, enough to drain all the low land, which they planted to alfalfa. Now the cattle are being fed on the alfalfa.

Good Foundation Stock

Another problem was the 500-acre vineyard, which was run down and would have cost more to take care of it than they could get for the crop. The soil was worn out and the vines were old, so they removed the vines and built up the soil for two years with cover crops, turning them under to help the soil. Then they cleared enough to make a total of 800 acres of cleared land. The ranch was fertilized and tile-drained.

They decided to raise Shire horses, beef shorthorn cattle, and Duroc-Jersey hogs as the most profitable project. Jack London was always devoted to the dumb animals, and, in fact, he immortalized them in his famous book, "The Call of the Wild." Mrs. London has always personally done the selecting in the breeding of the light horses on the ranch—saddle and driving animals.

Both Jack London's and Mrs. Shepard's main object on the ranch was to raise show stock, and not to buy it. To have accomplished this they obtained the best foundation stock they could procure, care-



Mrs. London on her ranch

fully culling out the young stock that they were to keep for breeding purposes.

At the time of Mr. London's death they were building their own slaughter house, smokehouse, and model dairy, intending to cure ham and bacon for the market, and to sell butterfat from a herd of fine Jersey cows. They have not done this yet. But the ranch is a comer, and it's run on business lines, as a farm should be.

Three Raps on the Door

By Sewell Ford

YOU know it ain't so simple as it looks, this livin' out in the monthly ticket sector. Not that I'm backin' up on the country proposition. I wouldn't swap my little old two acres of Long Island, with the squatty old house and the lilac bushes, for anything in town less'n the Carnegie block or the upper half of Central Park—not as a place to live in or bring up young Richard Hemmingway Ballard on. Vee wouldn't, either.

But it's a little complicated at times to know how to strike just the right gait. You see, in town you can pay rent for potted bay trees in the marble lobby, and be shot up to your three-and-bath by a haughty West Indian brunette in a liver-colored uniform; and after you've shut the hall door careful you can sit down to a delicatessen dinner smuggled up in wifie's knitting-bag. You can put up any kind of a front you want and nobody'll know the difference.

Out here among the canny commuters, though, it's different. The men know whether you roll down to the 8:03 in a sporty Knowles-Noyes, same as H. Stuart Kinney does, or hoof it, like me. And the women! Say, it takes them to size one another up. They can tell how much you pay your cook, and whether you're usin' tongs on your coffee sweetenin' these days, or a spoon. I don't see how they collect all the dope, but you might just as well be livin' with the whole front of the house out and your pedigree posted on the gate. None of that make-believe stuff goes out here: not for long, anyway.

Course, we did have 'em buffaloed a bit at first, comin' out as friends of the Robert Ellinses. That sort of tagged us as belongin' to the excess profits class and most likely as bein' sporty spenders. I expect that's why Vee was favored so soon with a call from Mrs. H. Stuart Kinney. She's some butterfly herself, Mrs. Kinney—one of these light-weight vampire types, with misbehavin' eyes and a lot of restless motions to her shoulders. Has a habit of callin' everyone "Honey," carries the makin's in her vanity bag, and wears a dinner ring on either hand. Comes from Atlanta. You know.

Well, she gushed away for half an hour before she discovered that Vee was eyein' her about as friendly as if she'd been the second from the end at the Winter Garden, and was bein' about as chatty as a cake of ice. Vee can give 'em the third-degree stare when she likes, and I expect Mrs. Kinney got the full benefit of it. Anyway, that chummy start of hers was all there was to it.

"Eh?" says I, when I hears something about it later. "You didn't go reverse the door mat so she could read 'Welcome' on it goin' out, did you?"

"How absurd, Torchy!" says Vee. "You know there's nothing of the sort on our door mat. And I was quite as polite as necessary, I hope. But when she found out that I didn't care to play bridge for stakes, that we probably would not join the dinner-dance set, and that I thought Bacardi must be a new Italian tenor—well, I fear she decided that we wouldn't be much of an addition to the neighborhood."

"How truly distressin'!" says I. "Now, I was in hopes she'd pick me out as one of the frisky lot she plays around with."

"You may still have a chance," says Vee, chucklin'.

Course, there ain't much use tryin' to

tell people who know all about commuters from havin' read the joke columns that not all of 'em are comic gardeners or chronic cook hunters. Yet the facts are that out in our section we've got a classy bunch, some of 'em just as speedy travelers as you'd round up at any of the midnight cabarets.

Take the Kin-

sides, you ought to come in for the sake of Mrs. Ballard."

Well, that kind of got me wonderin' if Vee shouldn't be havin' a little livelier time of it than she was. Not that she don't seem contented enough, with the baby and her flower gardenin' and so on. But, outside of the Ellinses and a few friends from town, we hadn't mixed much. Maybe there was some of the Country Club bunch that she'd like and ought to have a chance to get acquainted with. So, after chewin' the thing over a couple of days, I told Plummer that if the initiation and dues ain't too stiff perhaps I'll go in.

"Good!" says he. "I'll have your name put up."

I hadn't said a word to Vee, meanin' to surprise her by suggestin' casual some time that we go over to one of the Saturday night dances. I had

on I hadn't heard a word. But, somehow, I couldn't; and the next thing I know I've stepped in and am givin' Kinney the grin, square between the eyes.

"Go on!" says I. "Shoot the rest!"

"I—I beg pardon?" says he, eyein' me cold.

"Oh, come!" says I. "Can't I hear why I don't qualify to sign pink and blue slips at the Country Club?"

He's a chesty, stiff-necked party, Mr. Kinney—one of these heavy-chinned gents like they always pick out for movie heroes; and from the careless swing to his shoulders you'd think he was ready to wade right through any little unpleasantness that might come up, from havin' a tooth plugged to capturin' a dozen Bolsheviks single-handed. But under them bristly black eyebrows he has a pair of shifty shoe-button lamps that don't impress me a bit, and just now they're exchangin' swift glances with Plummer.

"I don't think I quite follow you," says Kinney. "Mr. Plummer and I were discussing—"

"If it wasn't me," I breaks in, "why does Plummer pink up? Course, you ain't on the stand, or anything like that, but when I hear myself bein' card-indexed in public I'm apt to get curious, that's all. So let's have the details. Do you get me? Why ain't I the clubby kind?"

"To be perfectly frank with you, young man," he begins—and then sort of hitches.

"Yes, I know that pre-amble," says I. "Make it as disagreeable as you like. I can stand it."

"Thanks," goes on Kinney, workin' up a tight-lipped smile. "As chairman of the membership committee I am supposed to observe rather closely all candidates. I have observed you, and— Well, my decision is unfavorable."

This brings a gasp out of Plummer, but I was more or less braced for something of the kind.

"Think you're a good judge, eh?" says I.

"The club directors seem to have confidence in my ability," says Kinney. "It's not a pleasant job, I assure you, to—"

"Just to save you any loss of sleep," I cuts in, "I'm goin' to scratch that entry of mine right now."

"That makes it much easier," says he. "And I trust you will not take this as a personal matter on my part."

"Me?" says I. "How could I? If you want to know, Kinney, I think you're dead right. I'd be about as much at home in your bunch as a ham sandwich at a Yiddish picnic. And, the worst of it is, I don't feel at all bad at admittin' it."

"Oh, really!" says he, hunchin' his shoulders.

And all the way in to town Norton Plummer tries to explain how this was just a case of private grouch on Kinney's part that he couldn't account for. Any-

way, he felt mighty sorry it had to come out just as it did. Also he hoped I'd forgive him for gettin' me into this, and he wanted me to know he didn't agree with Kinney at all.

"Don't worry," says I. "Maybe I'll live through it."

At that, though, the affair might have got under my skin if I'd had nothing better to do than mooch over it. But my job at the Corrugated these days ain't that kind. I'd no sooner unlocked the roll-top and gone to wadin' through the mornin' mail than Old Hickory calls me in. He's been havin' his own troubles lately, tryin' to push along [CONTINUED ON PAGE 33]



"Scotty" Allen and Baldy of Nome

The Dog That Saved His Life

THIS is Baldy of Nome, thrice leader of the winning team in the all-Alaska sweepstakes, hero of half a dozen rescues, sire and grandsire of twenty-eight dogs which served on the fields of France. With Baldy you see his Master, A. A. Allen of Nome, better known as "Scotty" Allen, who took 440 dogs, Baldy among them, to France to help win the war. The things they did added materially to America's laurels.

The French War Cross was conferred on Baldy's team for exceptional bravery under

fire. They hauled ammunition for the heavy artillery, pulling it into remote sectors on sleds, going into places where horses, mules, and motor trucks couldn't begin to go. The sheep-killing brand of dog we have no use for, but dogs like Baldy are a blessing to the race.

Lifelong friendship was cemented between these two when "Scotty," lost, dazed, and wandering in the Northern snows, was found by Baldy and his team, and carried to safety.

SELINE HESS.

neys, who seem to set the pace out here. I'll bet that half of your Riverside Drive apartment folks would go short of breath tryin' to follow 'em. So, when this lawyer neighbor of mine, Norton Plummer, who's had me workin' with him on the local Defense Council, suggests that I ought to join the Country Club and sort of get in the swim, I shies at the proposition.

"Me?" says I. "Why, in that crowd I'd look like a three-spot in a pinochle deck."

"Not at all," says Plummer. "There are all kinds of sets at the club. They're not all Kinneys. Many are young married couples who have modest incomes. Be-

an idea it was all settled except my bein' notified who to send a check to.

And then, one mornin' as I strolls around the corner of the station on my way in to the office, I happens to hear this little debate goin' on between Plummer and H. Stuart Kinney.

"But you surely don't mean," Plummer is protestin', "that you would—er—oppose his admission?"

"Absolutely," says Kinney. "He isn't the kind we want—not at all. He is—"

And just then Plummer, who has spotted me, tints up and begins makin' shut-off signals to Kinney.

I expect I had a right to sneak off and let

How Many Kinds of Business Man Must a Farmer Be?

By James H. Collins

BOSTON has a very fine publishing house. The manager likes to show visitors through. One day he had in tow a stranger whom nothing seemed to impress. Linotypes, perfecting presses, stereotyping, bindery—he viewed them all unmoved.

Suddenly they came to a little two-by-four room where supplies were kept, and the stranger stopped, fascinated. He asked permission to stay, and was there an hour, looking into the way the mops, soap, envelopes, and rubber bands were kept. Afterward it turned out that he was store-room superintendent with a big company, and keeping supplies efficiently his one interest in life.

The industrial world is full of specialists nowadays—men who center on one task. The president of a company lays out its policy and plans and looks ahead to tomorrow. The salesman goes out to find customers, and the credit man cautiously looks over every customer found, and decides how much merchandise each can have on trust. The purchasing agent cannily tests, weighs, measures, and counts all the raw material and machinery purchased. There are specialists who investigate chemical problems connected with the business—hire and manage employees—keep track of processes and costs. It takes talent even to keep books in industry.

A farm is really a miniature industrial corporation when you compare its operations and management with that of any big business enterprise. Even though it happens to be a small farm, run by one man, with the help of Mother and the boys and girls, and a few outside hands occasionally, still it is much like a thumb-nail Steel Trust in its business fundamentals.

The corporation president would be alarmed if he had to make decisions in as many separate fields of work as the average farmer. The whole trend of modern business teaches him that such questions can only be decided safely by men who know that particular thing. Perhaps this is why few captains of industry are able to run a farm and make it pay—after a couple of years' effort they are usually content to call it a "country home" and

be dubbed "agriculturists," and let it go at that.

The farmer is a corporation president when he plans his crops and lays down the season's program for cows, steers, hogs, and wool. About the best thing a big business executive does is look ahead to tomorrow; but the farmer looks further ahead when he plants an orchard. If a chemical problem arises in business they refer it to the chemist, and he retires to his laboratory to find out what is wrong with a process, or how it can be improved or cheapened. The farmer must know more about chemistry

than the average corporation president—chemistry of soils, fertilizers, feeds. The farmer must be a well-posted buyer of machinery and supplies. He must be a financier, managing his own capital and supplementing it with loans from the bank. He must organize his day's work as a factory manager organizes processes, and the job is more difficult, because factory processes are pretty much the same through the year, and conducted indoors, while farm processes change from week to week, and even from day to day, and are subject to the changefulness of the weather.

There is a selling end to the farm also, for the difference between profit and loss often lies in getting stuff to market at the right time and in the right condition. There is a credit end to farm management, because unwise sale of crops may result in loss. There are cost accounting, and bookkeeping, and clerical departments in farming, and upon a firm grasp of these very often, the success of all other activities depends.

A farmer needs to be so many different kinds of business man, in fact, that it is well worth his while to sit down occasionally and regard himself as what the psychologists call a "multiple personality."

He ought to picture himself as the manager of a business that employs a whole staff of specialists—and he himself is all of them! That will lead him to think about laying down sound plans and broad policies. If policy and plan are right, it will leave him a clean mind for tackling the specialties, such as hiring men, supervising field work, buying live stock and implements, selling his crops, building up his soil by fertilizers and rotation.

And when he sits in the executive chair as president and general manager of a farm he will find that there are specialists at his call. As the corporation president pushes a button for the company chemist or sales manager, so the farmer with a broad executive point of view can push the button for the county demonstrator, the manager of the co-operative marketing organization, the state and federal agricultural experts in soil chemistry, breeding, crop rotation, seed, fertilizers, and all the specialties on the farm. These specialists have been working for him for years. Out of their labor has grown a mass of technical knowledge, and they themselves are ready to help him apply it to his affairs.

The corporation president swings big business largely by dividing it into sections and handing each section to a specialist.

When the farmer understands how many different kinds of business man he must likewise be, he will be able to swing the farm like the Steel Trust, and overcome a farmer's disadvantage in being a modest producer in an age of production giants.

How I Started Bees on a Piece of Luck

By Robert Wood



FOUR years ago a swarm of bees chose one of our apple trees for a resting place. It attracted a lot of attention from the neighbors. None of us knew anything about bees, so we just watched them with curiosity.

A stranger passing the house saw the bees and came in and showed me how to capture them. It was with this swarm, led by their queen, that I started my first hive. When I found that one hive would make 50 pounds of honey a year, I began to take a big interest in them and read up on bee culture.

The first year started off well, but at the end I found that my biggest return was experience. Moths got into the honeycombs. They ate the honey, and killed the worker bees by scores before I knew it. Then I found there is a patent hive that will keep moths out.

My next disaster came from setting up the artificial combs wrong. The drones got in where the workers wanted to store their honey, and thus ruined a lot. Then the queen began to lay eggs in the wrong place, and darkened up a lot of combs that would otherwise have been white.

With the second season, however, I was armed with knowledge. I had learned how to get new queen bees and start new hives; how to keep down and sift out the drones and protect and encourage the workers. In the summer our old apple orchard was black with bees. We just gave it up to them.

This year I have 40 colonies of bees. My honey crop was 2,500 pounds, over one and a quarter tons of pure white honey. Most of it was sold to people who came out to the place especially to buy it. The price was 30 cents a pound, retail.

Government is liable. If the domestic and foreign consumers will not buy wheat at \$2.26, the farmer will sell, as is his right, to the Grain Corporation at this fixed price, and the corporation is compelled to buy.

The 1918 crop is a known quantity. It is already harvested, and a large proportion of it has been consumed. The 1919 crop, however, presents immensely greater difficulties. It will be without exception the greatest crop ever harvested in this country. It will consist of winter wheat planted in the fall of 1918, and of spring wheat to be planted in the spring of 1919—

this spring. The planting is now under way.

Last fall the American farmers sowed 49,261,000 acres to winter wheat. This was one sixth more (16.5 per cent) than had been sowed in the year 1918. Assuming an equal increase in the planting of spring wheat, we shall have a total wheat acreage for the year of 75,261,000 acres. No such area has ever been planted before to wheat. The actual acreage, however, may be even greater. There will be a greater incentive to plant wheat, owing to the fact that it can be sold at a guaranteed war price, while corn, rye, barley, or oats must be sold at peace prices, which may

What About—

[CONTINUED FROM PAGE 5]

329,000,000 bushels remained in the hands of the farmers. On January 17th there were probably some 230,000,000 bushels still unsold. If the present demand continues the Government will incur no loss; if, however, Europe refuses to buy the wheat at present prices, the Government will be forced to make up the difference between the guaranteed price and world price.

It is probable that some of this 1918 wheat will be left on the Government's hands. Europe has passed through a wheat panic. She not only did not have enough for present consumption, but she also lived in a constant dread of the future. That dread is passing. Large supplies are being released from Australia, Argentina, northern Africa, and other regions. The Australian wheat has been accumulating for four years, and much of it can be exported now that the shipping facilities of the world have been increased. Europe of course will not pay higher prices for American than for Australian or Argentinian wheat. The problem, in other words, is this: Will the European demand be sufficient to absorb all our 1918 wheat at a price equal to \$2.26 plus transportation charges, which have been as high as \$1.50 a bushel, but which are now lower? Whether Europe can absorb this will depend upon what parts of Europe are to be fed. If we feed Germany, Austria, Hungary and parts of Russia, as well as Belgium, France, Roumania, Serbia, Czechoslovakia, Jugo-Slavia, and Poland, we shall not only relieve famine and avert anarchy, but also shall be maintaining the price of wheat by increasing the world demand. Mr. Hoover's plans are therefore a benefit not only to the countries to be relieved but also to the United States. In any case, however, we shall probably be left with an unsold balance of 100,000,000 bushels, and we may be left with a balance of 200,000,000 bushels. For all of this the

—\$2.26 Wheat

sharply decline. This can't be helped.

Even with the worst weather conditions the increase in the crop will be enormous. But the growing conditions to date have been excellent. It would seem as though the weather during these last two years has been perverse. Last year, when the country was freezing and we required every possible ton of coal that the country could produce, the thermometer went down below zero, the railroads were thrown out of commission, the harbors were clogged with ice, and work at the mines became almost impossible. This year, on the other hand, when we have plenty of coal, the winter has been exceptionally open. We find the same contrast with regard to growing conditions. This year, when we are threatened with an immense surplus of wheat because of the great acreage sowed to that cereal, the growing conditions are almost perfect (98 per cent), and the crop threatens to be enormous. As a consequence of all these conditions the wheat crop harvested in 1919 may well amount to over 1,100,000,000 bushels, or almost 500,000,000 bushels above our requirements for home consumption.

We cannot export this wheat to the Allies and neutrals in Europe, because they will not need it. They will grow much more wheat this year than last, and they have other sources of supply.

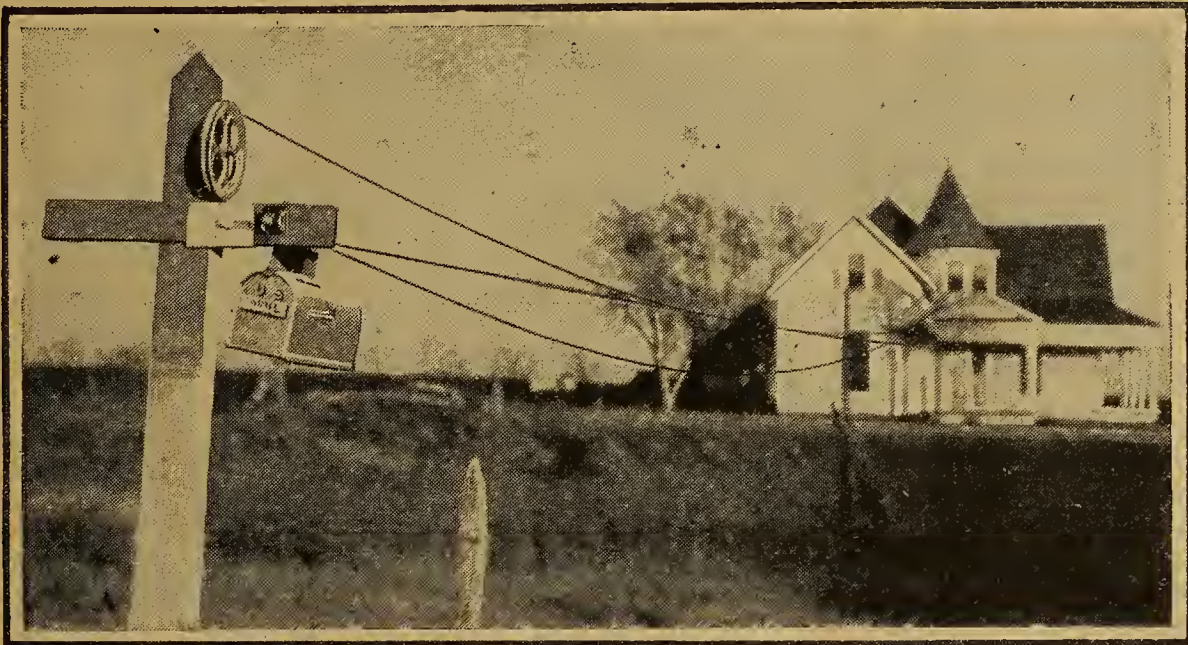
We are likely to exaggerate the importance of the American export of wheat to Europe. In ordinary years we are not the chief wheat-exporting country. Our population has grown faster than has our wheat production, and within recent years our export of wheat has been much less than it was forty years before. During the three years ending 1914, Russia, Argentina, and Canada all exported much more wheat than did we, and the combined export from British India, Roumania, and Australia was more than twice as large as our American export. During this period our net exports of wheat and wheat flour averaged only [CONTINUED ON PAGE 42]

Easier Ways to Do It

THE pictures and descriptions of these devices are published by courtesy of "Popular Science Monthly." They came originally from real farmers, and have been fully tried and tested. Let us know how you like them. If you do, we'll print a page of them once in a while.

THE EDITOR.

SINCE we were not blessed by Providence with eyes in the back of our heads, and since it's pretty hard to steer a motor plow right and keep an eye on the depth, turn, and regularity of the furrow, this mirror idea may help a bit. A man out near Racine, Wisconsin, mounted a mirror vertically in front of and slightly higher than his eyes. He mounted a second at the rear, as you see it, at an angle of about 45 degrees. Thus can he look ahead and see behind him.

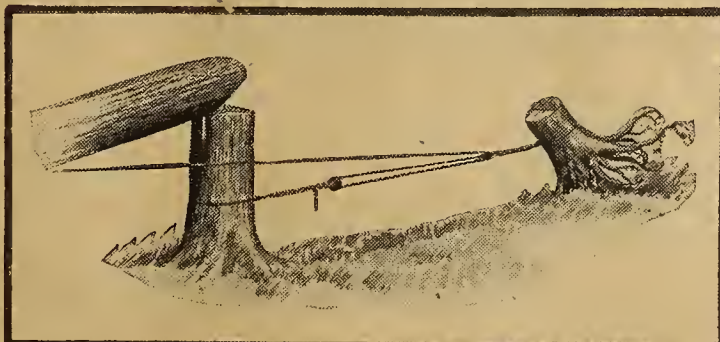
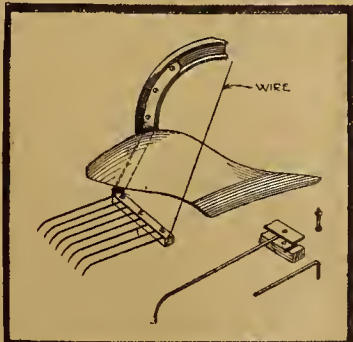


A FARMER down in Texas got tired of going to his mail box, so now he makes the mail box come to him. Maybe you too don't like walking outside of business hours, and want to try his plan. He simply applied the breeches-buoy idea. Detaching the mail box from its post, he suspended it from a wire extending from the house to the post, and running over pulleys like an endless chain. Then he wired an electric-bell circuit with a push button at the post. Now he hauls in his mail when the bell rings.

THIS sling reel for the front end of a hayrack has saved its inventor lots of time and trouble. He used six-inch T-hinges to fasten the standards to the rack, and held them upright by braces fastened to the back of them with two-inch strap hinges, and to the top of the rack by hinged clasps held down by tapering wood pins. He folds the rack down out of the way by removing the wood pins and lifting the braces. The slings themselves are wound on the reels when not in use.



THIS simple little one-furrow follow-up harrow was made from a piece of wagon tire and some old hayrake teeth, and attached to the beam of the sulky plow with a colter clevis. A piece of hickory eighteen inches long by two and one-half inches square was shaped to hold the teeth ends, set in grooves two inches apart. The teeth were made fifteen inches long, and turned to fit over the end of the block. The continuation of the tire was bent to clamp on the side of the plow beam. When the bolts and clevis are snug the harrow works fine.



A MAN out in Newport, Washington, rigged up this cable and pulley scheme to make a falling tree pull up the near-by stump of another. To prevent the butt of the falling tree from slipping, he puts a spiked pivot-block in the notch made by the ax. Of course this won't always work out, but where you are cutting a lot of trees, close together, you might just as well as not make use of the horsepower of the falling one.

Where She Had Gone

By Mrs. Ralph Osborn

Illustration by J. C. Coll

OF COURSE, you all wondered why I resented Bleeker's question the other night. It wasn't so much what he asked as what his tone implied I objected to.

If you'll let me tell it in my own disjointed Irish fashion, I'll explain:

About six months ago, in a spell when I wasn't filling an engagement on the music-hall circuits, a London manager asked me to go to France for a fortnight, to sing to the Tommies.

"Sure," said I. "I'm fifty, my eyes aren't of the best, and the doctors won't let me into a regiment, because they say my heart's wrong; but if I can sing my little help to the men I'm ready."

One evening when I was expecting to sing amusing songs to the lads, after seeing a few of them dead and others mangled, I went for a walk—just to steady my nerves and my voice—a couple of miles beyond the camp, out past what had once been a little French village. It was ruins. Its roads were torn up and riven with wounds. Its church was still partly covered, and over it floated the Red Cross, for inside it was an improvised hospital.

The sun was going down when I started, and as I returned (I admit, I turned back when I heard the peculiar sound I had learned to recognize as shrapnel) the big full moon came up, peaceful as if this world war were not.

As I reached the church door, a nurse stood in it, beckoning to me. I went to her. She said, in low tones, that falling shrapnel had killed two of her wounded, but that there were a few others. She was too small, she said, to lift them alone, and her two helpers had been killed. Would I help her to move them? As we stepped under the arch of the door I saw beyond, beside the altar, forms on cots.

At that moment a shell burst over them, tearing away, as it came, the Red Cross emblem of mercy, and scattering its fragments upon them with pieces of steel and flashes of fire. I heard only one muffled cry from among them. She had rushed

forward; and as I came to her side, begging her to come away, she called over her shoulder: "Not yet. They need me."

But they didn't need her; not one was left alive.

Again I begged her to come away. This time she did—her head bowed low and her small body shaken with dry sobs. As we walked down what had once been a wide aisle toward the door, another shell screamed over our heads. I saw her sway, and as I caught her she looked into my face—her own was in shadow.

"Terence O'Neill!" she said; and then, and only then, was there a note in her voice that took me back to days in London and flashed before my mind visions of audiences in theaters, gay and laughing. Why she suggested them I could not fathom. I looked again; and as she faltered against me, her nurse's cap fallen off and blood oozing through her dress, I saw, in the whitening moonlight, the face of Edna Carstairs. Her hair, that mass of sun-gold ringlets, was short now, and curling around her face, like the hair of a cherub in a picture. The saucy mouth that had refused the kisses of London's idle men had the saddest little droop; and the whole tiny form, once so softly rounded, was worn very thin.

She tried to walk on, but I took her in my arms as I would have taken a baby, and carried her toward the camp in the hope of help. Once or twice her big eyes opened and she tried to smile. Then she talked, low and faintly, and with intervals of silence. I bent my head to listen.

"Terence," she said, "I've been here three years. I just came away because no one needed me anywhere else. And I couldn't go on singing and making merry jests and dancing when even the toads and lizards of the Piccadilly clubs had become men. I've seen lots of them out here; kissed them good-by before they went their long journey alone in the dark—men I wouldn't have let kiss me in London any more than if they'd been snakes. I've sung to them, and cared for them;



I took her in my arms, and carried her toward the camp in hope of help

but"—with a little moan of pain—"I fancy it's over."

I was speechless. I only tried to hurry faster over the uneven ground, and blessed the moonlight while I cursed the men who had sent that shell with curses deeper than I ever knew I could feel.

"Am I very heavy, Terence?"

I said she was not, though, little as she was, I was beginning to feel her weight.

"You used to sing in a church, didn't you, Terry?"

Indeed, I told her, I had sung for all

denominations that were willing to pay for a good voice.

Then she asked would I sing her a hymn or two. I held her closer as if someone were trying to take her from me. Somehow, I thought of the Erl-king trying to snatch her soul, and with what breath I could spare I sang as you would sing a lullaby to a child.

I remember the disjointed way things came to me. First I sang "Abide with Me;" and when she sighed and said it was so good, I tried again—"I Know That My Redeemer Liveth;" and then, as in a faint voice she asked if I knew the music to Tennyson's "Crossing the Bar," I remembered how I had once been paid a goodly sum for singing it at the funeral of a rich American.

I choked, and for the life of me I couldn't have sung it at that moment, with the vision of that great London church in funeral array before my mind. So I said: "Yes, little girl, I'll sing it for you when we get to the end of this trip. Now let me hurry you to help," and I stumbled on.

At the outpost dressing station they took her gently from my arms. They hurried for the head surgeon, but it wasn't any use. She directed a nurse to feel inside her dress; and there was a rosary of pearl beads and silver, now dark with her own blood. Never were beads more truly consecrated. She gave them to me.

"Terry," she said, "I'm going home. I tried to make them happy in the old days when I wasn't over-happy myself—and they thought I wasn't very good, or a real lady. Then I tried to make them less miserable in their pain, and they called me an angel—and that wasn't true, either. Good night, Terry."

So now you see why, when Bleeker said, "That pretty Edna Carstairs dropped out of theatrical circles suddenly—with whom?" I resented it. I couldn't, in a men's club, where I was a guest, well have said to a member of that club, "She went out with God." I'm an actor, a singing comedian, not a preacher.

Getting Six Per Cent from Your Tractor

[CONTINUED FROM PAGE 11]

two-cylinder engine of 20 horsepower. The cylinders are 6½-inch bore, pistons with 8-inch stroke. The speed is 500 revolutions a minute. That means there are 500 explosions a minute in each cylinder. Each explosion hits the piston head a blow of more than four tons! Now stop a moment to consider the strain and shock to parts standing up ten hours a day under 500 four-ton blows every minute of the running. Do you think there could be any economy in cutting down on the quality or quantity of lubricant or anything saved by not taking time to see that every nut and bolt and bearing is just as it ought to be before the engine is submitted to such an ordeal?

"Or, if you want to look at it from another angle, suppose we have a 60-horsepower, four-cycle engine, making 1,800 revolutions a minute. In a ten-hour day each piston will make exactly 2,160,000 strokes as a result of these trip-hammer blows. At the end of the day your four pistons will have made a total of 8,640,000 strokes! It won't take long to convert that engine into junk if lubrication is slighted or nuts allowed to work loose.

"It is this problem of reducing to a minimum power losses between engine and drawbar that prompted tractor designers to throw out cast gears and equip their machines with cut gears, highly polished and made of the finest material obtainable. It is this very problem which did much to correct the impression that the worm drive could be successfully worked into the design of the tractor. The worm drive is all right when it comes to speed reduction—oh, yes! But speed in a tractor is not the prime consideration. That consideration should be and is economical power transmission. And the worm drive will not transmit speed and power at the same time. Worm gearing gives point contact, while other types give line contact.

"There is too much wear to the worms. They wear badly even under the best possible system of lubrication.

"No, this idea of speed won't fit in with the tractor. Designers and operators alike

heeded in the case of overloading a tractor and expecting it to jerk itself right into high from dead rest. The automobile is intensely more elastic in design than the tractor; the initial shock of starting from rest in-

tion by equipping the drawbar with springs, but this is nothing more than a makeshift; it doesn't solve the equation. The real solution lies closer up to the tractor itself, and the trouble must be corrected through modification in design.

"A farmer can't overload and overwork a horse without paying the penalty in decreased efficiency in the animal. If the horse is overloaded he'll try to make the best possible job of the situation; a mule knows when he's overloaded, and nine times out of ten will stop and remind the driver of the fact. But the tractor, unfortunately, can't turn its head and look the operator in the face when it has been hooked on to three plows in stiff soil, when the book of instructions which came with the machine caution against using more than two plows under such conditions. All the tractor can do is to slow down and labor and strain along, making the best possible job of the driver's blunder.

"If the driver is versed in the language of his tractor—as he must be to succeed with it—he'll recognize its voice of protest and reduce the load. If not, he'll keep right on punishing his machine until something wears, loosens, and eventually goes smash.

"If the load proves too great to be moved from rest, the operator can of course throw out the clutch, speed up the engine, and then let the clutch in again. He may start the load to moving, but it's almost certain that along with this accomplishment he'll start and strain and smash the very vitals of his machine. Something has to give under such brutal treatment—it's like the old query, 'What happens when an irresistible force meets an immovable body?' You know the answer.

"The tractor owner should get the salesman who delivered the machine to explain fully how to find a [CONTINUED ON PAGE 26]

Do You Know an Opportunity When You See One?



ALTHOUGH of pure-bred Lincoln stock, this was just a little "bum" lamb which was unable to keep up with the flock on the trail from the mountains to the lower valley for winter feeding.

A kind-hearted girl passer-by picked up the little waif, and after a winter's careful feeding it rewarded her with the fine fifteen-inch long fleece which it so proudly shows us in the accompanying picture.

The fleece of this yearling brought the girl a ten-dollar gold piece.

The Lincoln promises a much heavier fleece for the next shearing.

All of which just goes to show that you never know when opportunity is going to stare you in the face. So the wise thing to do is to be always on the lookout for it.

HELEN SINCLAIR.

must observe a distinct line of cleavage between the tractor and the automobile. As soon as the operator begins to drive his tractor for speed he's making trouble for himself. No operator should try to push his tractor at a greater speed than 2½ miles an hour; his machine will operate at greatest efficiency when held down to that speed or even less. Let the automobile do the speeding.

"This same warning against thinking tractor in terms of automobile needs to be

to moderate speed in the case of the automobile is quite readily absorbed, partly by the lightness of the load and by the slipping and giving of the rear wheels. Particularly is this true when the automobile is stalled.

"But the initial load on the tractor under like conditions is not so easily absorbed; it comes with a distinct shock. Personally, I think one of the vital engineering problems in tractor design lies in finding a way to reduce this shock to a minimum. Some manufacturers have approached the solu-

What It Costs a Farm Hand to Take a Job in Town

I KNOW a farmer who, feeling the pinch of inadequate labor on his farm, figured out a common-sense way of keeping his men with him. He lives in New Hampshire, and as you can see from his picture he is a good, substantial citizen. This is what he said: "They told me I would have a lot of trouble keeping my help, when I first came up here, and I studied over that problem for quite a while. There are a good many factories of one kind and another around, and for a while they were offering from \$3 to \$5 a day for factory hands. "Not long ago one of my men came to me and said he thought he'd quit. He said when he could make anywhere from \$20 to \$35 a week in a factory he thought he'd be considerable of a fool to run along on a farm at \$30 a month. "And your board," I reminded him. "But it's all right, Bill—if you want to turn loose and go over to the factory it is up to you. Only remember that if you go don't come back to Hamilton Farms when you have found out your mistake. And before you decide let's just sit down here and go over this matter of the factory versus the farm. If you go over to the factory you will get much higher wages in actual cash, no doubt of that. You may make as much there in a week as you make here in a month. But you'll pay out more money too. "They charge a pretty stiff price for board in those factory regions, because they know the men make good money. Boarding-house keepers have their right to share in the general prosperity. They'll charge you all the traffic will bear, and for laundry. In the evenings, when work is over, they'll sneer at you if you want to wash up and eat supper in your overalls. You'll have to have new clothes and big laundry bills. You'll go down-town every evening and spend a lot of money on the shows and the girls. At the end of the year you won't have any more money than you have here, and you'll have a lot of experience that you can never cash in on. "Now let us figure how you come out here on the farm: You get your thirty a

month clear. You get the best meals money can buy. You know the farmhands all over the country would rather work here for less wages, because they know they will have a comfortable bed to sleep in after the day's work, and three good meals a day. If you get sick the women-folks look after you and see that you have medicine and good care. Your laundry never exceeds 50 cents a week. "A suit of clothes lasts you two years. Every Saturday afternoon when there is a ball game all you boys knock off in time to crank up the car and drive over to the game. Twice a week you have the car after supper to go over to see the picture show in town. You have a good time and get back in season for plenty of sleep in a good bed and a clean room. At the end of last year you had saved, free and clear, the tidy little sum of \$250, counting the bonuses I gave you for extra work in getting in the crops and for keeping the horses and the barns in good shape. You had had a year of hard work and of good food, good beds, and plenty of wholesome recreation. You were never in better health in your life. "There's Charlie Martin—he's the one who has been talking to you about going to town, I know. He used to have your job, and he wants it back. He's been over in the factories for over a year now. He's making good money, but he's spending every cent of it; and only the other



His help like to work for him

day, in town, he told me he wanted to come back on the farm and have a chance to save some money, because he wants to get married. "At the end of the year, when you have a nice little pile of money coming to you, with a good digestion and a healthy body and mind, Charlie has practically no money. And he claims his stomach is about ruined by the poor food he has to eat in the restaurants and boarding houses. It will take two years on the farm to put him back where he was a year ago. "If you think it pays to take one of these expensive jobs in town, go try it. You'll find in the long run that you have spoiled a mighty good farmer to make a darn poor factory hand. "In a few more years you'll know about all there is to know about practical farming. You'll have enough money saved to get you a place of your own and a chance to get busy on the job of raising farm stuff and a family at the same time. You will be a trained and experienced farmer, able to earn your living anywhere in the country. So make your choice right now, Bill. I don't want any man on my farm who lets his judgment run away with him. If you don't think farming is a career worth following, don't try to do your work in an atmosphere of discontent—get out and into something you like better. I can get other men to take your place;

but you've worked for me some time and I take an interest in you and hate to see a good farmer deliberately turn himself into a second-rate town man.' "Well, sir, Bill saw it my way and I had no more trouble with him. Feed 'em well and treat 'em right, and figure out the cost of taking a job in town when they talk about leaving, and you'll have no trouble keeping help." E. SEARS.

This Man Wouldn't Quit

By Marion Stingle

IF WHAT a man achieves is to be measured by the difficulties he has overcome, then Otto L. Frincke, of Denver, belongs in the front rank. Twenty-six years ago Frincke, then a prosperous contractor, fell from a roof, and so injured his spine that the surgeons said he could never again lift his head from the pillow. But Frincke wouldn't quit. He kept trying—"willing" strength into the paralyzed muscles, as he said, until he could raise his head and be propped up a little way. Then he had a typewriter placed by his side on the mattress, and mastered the machine. Through long, pain-filled, sleepless nights he taught himself bookkeeping, and, having mastered that, sent for the directors of the sanatorium. "I want a job," he said. "I can run a typewriter; I can help answer your correspondence; I can keep your books. Put me in a wheel-chair in front of a desk, and you'll find me a first-class office assistant." So they did it, and Frincke more than made good. In addition to his duties as typist and bookkeeper, he learned to run the telephone switchboard. When off duty, the indomitable cripple is always writing. He edits the clever bimonthly paper of the sanatorium, and has sold several articles to magazines. And he has done these things in spite of the fact that, owing to after-results of his injuries, he has had to have his right leg amputated at the hip.

Do You Suffer from Tinkeritis?

By W. C. Smith

THIS story has to do with a peculiar malady. I have seen its work in many localities and in all walks of life. Its victim seldom knows that he is afflicted. It is a habit more than a disease, and more of a disease than many people suspect. It is called tinkeritis. I have in mind a young fellow of my own community who is badly affected. This young man is well posted on things pertaining to agriculture, rents a fine farm of 140 acres, has the privilege of remaining on it for five years longer, and has already farmed it for three years. It is well fenced, has good buildings, two silos, and all of this for a price that the average renter would jump at. But this man has just about broken even, and will be lucky if he continues to do so. Cause: Tinkeritis. He bought a tractor. The tractor was needed. It is a standard make, tried and tested by years of service, and it worked well for a while. But the owner must adjust this and that and the other thing, and his hired hand plowed more land, put in more crops, and cultivated them with three horses, than could the owner with the tractor. Result: The tractor got a black eye in our community; the owner failed to get his crops out in time and lost money. You say such practice is foolishness. Granted; but it happens in various ways in almost every community. This young fellow spends enough time going from one job to another to aggregate an enormous number of hours, even days, in the course of a year. To illustrate, I will say that I have seen him unhitch from the plow in an unfinished field, harrow a few rounds in another, leave that and hitch to the manure spreader—all in the course of a day. I saw him—and this is by no means an uncommon occurrence—keep a threshing crew, and all the farmers who were helping to operate it, waiting for nearly two hours while he prepared a place to thresh his oats. Those oats had been sown in April, and he had known ever since that the day must come for them to be threshed. He tried dairy

cows and made some money at it; but old tinkeritis bothered him as usual. I remember that he bought a car with which to deliver milk, and the machine suffered the same fate as the tractor. Fortunately, the automobile was an institution and its reputation beyond hurt. I know another man, not so young now, who has farmed all of his life. He is not a success. He has made no money to speak of, his family works hard and has no permanent prosperity. He is continually starting in. This man's tendency runs to the specialty crops, the truly 'whoppers' that hold out alluring prospects. He has tried them all. The only time he ever made any money in his life was once when he got into debt rather heavily and he was literally forced to keep on the jump by his creditors. They made him hustle, and he admitted afterward that he made the most money in the shortest time he ever had in his life, and was going to stick to that plan. He vowed that he had learned something, and his wife and children brightened perceptibly. But presently he was back in the same old rut. The hold of tinkeritis was too strong. How many unnecessary trips have you made from the house to the barn in the last few days when work pressed? How many hours are you going to lose next month that might be saved by careful planning now?



The Commodore of Eagle Point

"YES, I have had a little success at farming here on the Volga. But it seems to me that almost anyone else could have done as well as I have—if he had taken time to look around. "Perhaps it would have been just as well if I hadn't talked so much about what I was going to do. At least I think that is one reason why some of the people here nicknamed me Commodore, though I well know that my last name is that of a mighty commander on the high seas. I overheard a boy saying, 'Dad says this man that bought the Eagle Point farm thinks he can sail right over the rest of us, raising cattle and crops, so we call him Commodore.' "Maybe my liking for a farm near the water had something to do with the nickname. I kept on for quite a while talking about how I liked the Volga and Eagle Point, though many farmers said, 'No hump of rocks or cricks in mine.' Some of these men were jealous of me? I don't think that. I rather think that I did too much talking. "But I quit so much speech-making after a while, and went to work. I bought the best bunch of cattle I could find. It didn't take me long to find out how they liked to go down the bank to the spring at the foot of Eagle Point. They seemed to thrive on that water better than if they had the chance to drink out of ten wells. The climbing up and down the bank to the water took the fat off 'em? That

He Got Bread from Stones

By C. N. Sinnett

some men told me would happen. But on that kind of exercise the neighbors found they weighed better than their stock that laid around so much in a level pasture, just chewing their cuds. They didn't tell me much about it, but the scales told the story, and I didn't find any of them weeping over the Commodore's 'Foolish Point Farm.' And what fun it was to see the cattle wading out in those shady places on a hot day and enjoying the grass after that! And in winter days they had lots of comfort down there, sheltered from the big winds, and a big haystack near-by. "Hay didn't grow on the Point! You're right. But I found below the Eagle that I could drain a long strip that had been overflowed by the water from an old mill dam. The cattle could go down to that. And in a year or two I fenced it in, and cut a big lot of hay, which I could haul up in the shelter of the Point. Some jolting to the old hayrack, of course; but I got a bigger price for my cattle than almost anybody else in the county. They had a chance to roam around and exercise when other cattle were bellowing away in the barns. And for two years now I've raised fine corn on that place where the water used to back up, and some thought it was all covered with sand and good for nothing. Ninety bushels to the acre, and ripened up in prime condition! You never can tell until you investigate."

How Do Men Differ from Snapping Turtles?

ANY man really worth the name has something of the snapping turtle in him—that is, when he gets a good "holt" he wants to hang on till sundown. Next month will appear an article concerning a wise father and his two stock-loving, stock-raising boys. If you want to learn the difference between a man and a turtle you will not miss "What the Augustine Boys Did."

The Four Secrets of My Farm Success

Jephtha Crouch's own story of how, starting without a penny, he has made \$100,000 profit a year from his business

By Jephtha Crouch

(In an interview)



Jephtha Crouch and one of his best friends

If You Don't Love Your Job, Sue It for Divorce

IT'S as important for a man to love his *job* as it is for him to love his wife. If you don't love your wife, your marriage will be a failure. And if you don't love your job, *you* will be a failure. The author of this article tells why. And he doesn't leave much room for doubt. There's a divorce court for unloved wives, but there's no divorce court for an unloved job, except yourself. If you don't love your job, bring suit for divorce against it in your own mind, and marry one you do love. If you *do* love it, never give it up.

THE EDITOR.

YES, it is true that my profit from horse-breeding for the American farmer has sometimes been \$100,000 a year, net. But there's nothing strange in that. Any man who does the thing he loves, who does it in a businesslike way and sticks to it because it is the one work he loves more than anything else, is bound to make a success—both in money and in happiness. That's what I did. From the time I was a little boy I loved horses. They have been my business and my pleasure all my life, and I still love them. It is true that I have made a lot of money breeding them. And I am glad to have the money. It comes in handy. But remember this: I haven't made my money because I started out to make a lot of money, but because there was money to be made in the business that I loved; and, loving it, I have perhaps conducted it better, hence more successfully, than a man who didn't love it. I have had a keen interest in studying and improving my business. It has never been a bore to me. Had it been, I would have failed.

Therefore, if there is any bit of advice to be picked out of my success and handed along to you for what it is worth, it is this:

Do the thing you *want* to do more than anything else. If you *hate* your farm, you will never make a success of it. Just in proportion as you *love* it you will make a go of it. If I were running a farm and my heart were in a grocery store, I'd never quit until I got my body there too. If I were breeding horses and my heart were on a wheat ranch, I'd throw the horses over and take the wheat, at all costs.

A man is a good deal like a bucket—you can't get something out of him that isn't in him. If I didn't have horse love in me, you couldn't get horse success out of me. I'm not an exponent of the back-to-the-farm movement. Heaven knows we don't need *more* farmers, but *better* ones. But I'll bet you ten to one that many a city business man plugs along on a bare living because he has the heart of a farmer, and many a successful city business man

is a mediocre farmer because he happens to have been born on a farm. It might take him some time, but eventually that city business man would be a successful farmer, and that half-hearted farmer a successful city man, if each would throw environment out the window and follow his natural bent.

Of course, after love of the business, there come the specific principles on which I have built my success. There are three of these—quality, advertising, and keeping everlastingly at it. Granted that he likes what he is doing, these three principles will bring success to any man in any line of business. Just apply them to yourself, or to men you know, and see if they don't work out. They will!

If you produce better wheat, or apples, or eggs, or truck, or corn, or anything else, than other growers produce, and if you get it before your customer (which is advertising it)—the elevator man, or the commission merchant, or whoever you deal with—as distinctively *your* product, you get a premium on it, don't you? A premium for what? Why, for quality. And if your quality falls off, your premium falls off, doesn't it? That's why you've got to keep everlastingly at it. And to keep everlastingly at it you've got to love what you're doing.

As for me, it was my great love and admiration for horses, my almost constant association with horses and horsemen, together with intense ambition, which accounts in general for my success. I started without an atom of capital.

My business career began, you might say, when I was just able to tell the difference between a horse and a cow. From that moment I developed an interest in horses which has remained with me ever since. The fact that my brothers, who were all much older than I, were horsemen, and the fact that I was brought up on a small Kentucky farm surrounded by thoroughbreds of the blue-grass country, may account for my continued interest in horses. Anyhow, when I was old enough to go to school my fear of a flogging was small compared to the fascination of the

splendid creatures who winked and tossed their fine heads at me from the fields as I passed by, conscientiously intending to go on to school. But usually I couldn't resist visiting with them. That reminds me of a story I read not long ago about a little boy who was always telling his parents what the horses visited with him about. Of course, they didn't believe him. At any rate, it was then, when we visited together, that I learned what a fine horse should be. That fascinating game and the chores kept me so occupied that I had little time for school.

When I was about twelve we moved to a farm near Indianapolis, where good horses were scarce. I recognized the difference immediately, and realized for the first time that the thoroughbreds of Kentucky were not at my disposal unless I had the money to pay for them. One of them, I found, cost more money than we ever thought of having. Nevertheless, I resolved to own fields of horses.

While I was spending a dreary four years of work on the farm, I was making plans of the most impractical sort as to how I could get those horses. At sixteen I awoke from my dreams. Realizing the demand for blooded horses, I resolved to supply it. I had visions of borrowing enormous sums, and what else it doesn't matter, for then the Civil War broke out and I went to work for my eldest brother, who was a contractor of horses and mules for the Government.

Association with my brothers had taught me the good points of a horse. To further help me out, the Government had certain specifications as to color, size, height, age, and soundness. It was my job to go through the country buying up horses, or inspecting and shipping those which had previously been got together at various points. So much as to my early training.

At the end of the war I was twenty, in love and penniless. I married at once, going into the dry-goods business with my father-in-law at Monticello, Indiana, selling calico, coffee, and such things only to get enough capital to carry out my boyhood ambition. The work in the store was so uncongenial that I never could have stood it for twelve years if I hadn't been dealing in horses, hogs, cattle, and sheep at the same time, getting them together and shipping them to markets in the large cities.

In 1882, after twelve years of work, to support my wife and three children, I had saved enough money to buy a little farm on the outskirts of Lafayette, Indiana, where I laid the foundation, meager as it was, for what is now the Lafayette Stock

Farm. This time I had land, rough stables, and my family, but again I was penniless—and still no horses.

To buy horses I borrowed heavily. Horses were good security in those days, for the business of the country was growing rapidly, and not only drafters, but trotters and carriage horses, were much in demand. I thought it good business to borrow, feeling certain that I could pay it back again. Many times I owed \$100,000 to the banks. Usually it didn't worry me, but sometimes, when the money was coming due and I had nothing to pay with, I walked the floor nights. Any man with a big business has done the same thing. I hardly knew where the money was coming from; but I worked around, and always managed to get fixed up all right. Sometimes I told my creditors that I was hard up, or I went to a bank away from home—to St. Louis, Cincinnati, or Logansport—and borrowed. I paid one bank, only to borrow from another, literally playing a game of merry-go-round. I don't think it good policy to borrow too much. It hurts credit. But, "nothing ventured nothing gained." And borrowing money establishes credit.

Since I loved good horses, it was my ambition to deal in the best. At first my trade was simply in American horses, but shortly afterward I commenced my blooded horse business by importing trotters from Canada, which were Shires imported from England.

As the business grew, and just about the time that I was thinking I could make importations from Europe, I had a letter from Julian Van Landendorf, a big breeder of horses living near Brussels. Van Landendorf had obtained my name from the Belgian consul at St. Louis, and, thinking that I might wish to do business with him, sent prices and descriptions of some of his horses. I thought we might buy, but preferred to see the horses first. It would have been a big mistake to have any horses on our hands which were not quality, as it would have hurt our reputation for excellence, small as it was at that time.

Since I had taken my son George into the firm, J. Crouch and Son, at an early age, I thought I could safely send him to look over Van Landendorf's stock. So in 1887, when he was only seventeen, I sent him across the water for a score of Belgian stallions. George had a pretty good idea of what we wanted; but, to make sure, I had him stop off on his way to New York, at Wabash, Indiana, to see about 30 Belgians at the Wolff and Talbert Farm. It's [CONTINUED ON PAGE 54]

A Flower That Yields Delicious Jelly



made from its flower. The plant grows to about the height of a man's head, and the large yellow flowers, with red centers, open during the night and close in the middle of the forenoon. In the axil of each leaf several flower buds are ready to develop.

This plant, an annual, is very sensitive to frost, and requires plenty of sunshine on all sides. In California, plants have produced over a dozen pounds of calyxes in a season. The composition of the roselle and the flavor are almost exactly those of the cranberry. To prepare the roselle for cooking is a simple matter,

THE roselle is an old-world plant that promises to be popular with the American housewife because of the jams, sauces, and jelly which may be

and the retail prices range from 10 to 15 cents a pound. The picking is expensive, as each flower must be cut from the stalk with a knife.

C. A. GODDARD.



SOLVING THE INFLATION PROBLEM

POSSIBLY you may have wondered why it is that Goodyear Heavy Tourist Tubes are such good containers of air and why they last so long.

The most dramatic answer to that query is the giant gas bags which Goodyear builds.

Essentially the same underlying principles of construction with which Goodyear solved the inflation problem for lighter-than-air craft apply to the manufacture of Goodyear Heavy Tourist Tubes.

Nine years of pioneering have proved that rubberized fabrics, *built up layer-upon-layer*, form the most practical container for the elusive gas of the balloon.

Logically, therefore, this same *built-up* principle of construction proves most effective in the manufacture of Goodyear Heavy

Tourist Tubes where the inflation problem is greatly simplified.

Goodyear Heavy Tourist Tubes are made of pure grey rubber, built up and cured together, *layer-upon-layer*—many plies thick. Then the valve-patch is firmly *vulcanized-in*.

Small wonder that these tubes hold air tenaciously and last remarkably long!

Our dealers tell us repeatedly that car owners who are once persuaded to pay the slightly added cost of these thick, grey tubes, will have no other kind from that day on.

For they soon learn that these tubes are the best form of tire insurance—that they work well *with* and protect good casings.

More Goodyear Tubes are used than any other kind.

THE GOODYEAR TIRE & RUBBER CO., AKRON, OHIO

GOODYEAR
AKRON

What Farm Women Vote For

You might not think that there is any connection between votes for women and a man hitting a boy with a club, but this voter's story shows there is

As told to M. G. Franklin

WE HAVE had suffrage now in our State for about ten years. At first I didn't pay any attention to it. I remember the funny look Henry gave me when he hitched up the wagon on election day—that was several years before we bought our first car.

"Aren't you coming along, Ma?" he said, sort of laughing-like.

It was butter day and I was busy, so I shook my head.

"You vote for me," I replied. "We'd just vote alike anyway."

Which was about as far wrong as anything I could have said, as subsequent events disclosed.

I don't know as I can say just what put the voting notion into my head. I believe it was a little item I read in the daily newspaper which we had just begun to take regularly. It seems that some little boy—he wasn't more than eight or nine, as I remember it—had been working in a factory and turning his wages over to his drunken father. Well, one Saturday the boy got off at noon and went to a picture show instead of going straight home. He spent a few cents, not very many; but the drunken father took him to task, and the boy spoke up sort of plain-like for him, and in a fit of drunken frenzy the father up with a chair and killed the boy.

It made my blood run cold when I read it, for we had a boy just the same age, and he had been begging us to take him to town the next time we went to do our trading and let him see a movie; he'd never been to one.

I never connected the murder with my right to suffrage, though, till a month or so later, when I sat up in bed, in the middle of the night, cold all over, shaking as though I'd had a chill. I had been dreaming, and whether I dreamed it or thought of it just as I woke up I don't know. But here were the facts:

The election which Henry joked me about taking a part in decided whether our State was to go dry or not. And when the legislature took a vote on the question it stood a tie until the man from our county was reached—the last on the list, for his name begins with Y. And he voted "Yes," and the saloons stayed open. I'd hated that man from the day he was born; we'd been children together. I never thought of asking Henry to vote against him. He said afterward he would have done it if I had mentioned it to him.

But the thing that made me go cold all over, that night I woke up, was the thought that if I had gone to the polls, and a hun-

dred other farm women like me, we could have defeated this man, for he pulled through by a narrow margin, and we could have made the whole State dry. When I got to thinking of that little factory boy, brained by his drunken father, because whisky was to be had at a hundred places in the city where the murder occurred, I could hardly keep from screaming. I remember getting up to light the lamp—we still used coal oil in those days, but we have our own electric lighting system now—to see if there was any blood on my hands. I was sure for a minute that there was.

I haven't missed voting at an election since that night.

I'd like to tell you what all I think I have accomplished with my vote—that is, mine and the neighbors' and farm women's generally around here. The day has long since passed when farmers were not interested in the same things as city people. There is hardly a problem which besets the city that does not affect the country as well. There is no longer any dividing line between the two. Now, just for instance, take this case: We had had suffrage in our State only a year or two when the electric-light company in the town where we do our trading went before the council and asked for a new franchise. It was just a plain steal, but the council granted it, subject only to a vote of the people in the town affected. Now, of course, ordinarily you'd think we farm women would have no interest in a city franchise election, but here was how it affected us: The president of this electric light company was the head of a big bank; he had used his influence to prevent a lot of farmers, who had organ-

ized a rural telephone company, from obtaining the money they needed to borrow to start their independent line. As a result, all the farmer users of electricity were obliged to use the city service at an exorbitant price. We lived on the main road, along which the high-tension wires were strung. We wanted electric lights, but, honestly, the rates were prohibitive.

By this same indirect method (it would never have worked, though, before we had woman suffrage, for the city women's votes were cast to represent us) we succeeded in curbing and checking the social evil in the town where we do our trading, in the capital city, and in various other towns and cities throughout the State. I realize that many people are averse to discussing this subject in public. I am not one of them. I do not mean necessarily that we should call a spade a spade, but we must realize that the spade exists, no matter by what name we call it. In brief, I believe we have made great headway in reform since we began to speak more frankly on this subject.

Well, we women of the country, working through the women of the city, succeeded in wiping out the evil places which had existed all too long. We nominated and elected candidates for the town council, the county board of supervisors, and sheriff men who were pledged to this reform.

It was difficult at times to talk this sub-

IF YOU are a woman and have won the vote and don't know exactly what to do with it, or aren't as interested in it as some of your more ardent sisters, read this story. We'll wager that you will have a very clear idea of your vote's value when you get through.

Never before, in any publication, have we

seen this matter of votes for women brought down to actual application and specific cases as it is here. If a few more of the women of this country would come forward with their experiences, votes for women would be such a power in the land as never before. And the men might take voting a little more seriously too.

THE EDITOR.

We all knew the new franchise was a steal, but what could we do? Well, we did this: We farm women had a lot of city customers for our butter and eggs. We drove to their homes once a week and always visited a little while. Many of us belonged to a community club to which a number of city women belonged, sort of for the novelty of a day in the country to begin with, later on because they actually enjoyed it. Well, when we drove to town with our butter we told the women there what the franchise meant to us. We did the same thing at our next club meeting. The result was that the franchise carried by the men's votes, but the women voted it down almost unanimously, and they more than offset the men's majority. The company was brought to terms, and we have our own

independent electric-light and telephone companies now—the co-operative companies which are of splendid service and value to all of us.

subject over with the men we were sometimes obliged to meet, but as a rule I have found the men very courteous and gallant. At any rate, the great good we have accomplished certainly offsets the temporary embarrassments and the frequent blushes.

This is a very vital topic for farm women, too. I know how shocked I was when I first went up to the capital city and found out that a majority of the women and girl offenders arrested in the preceding year had been country girls. Now, country girls are primarily just as modest, just as pure, just as ladylike as town girls, but their lack of education on this subject has handicapped them. I'll wager the reports of future years differ from those of past years.

Now, of course, there will be some who will say, "But all these things have been done by city women's votes, not by farm women's." That is right to a certain extent, but we influenced our town sisters, just as they interested us and influenced us in reforms which they understood better than we did until we started co-operating with each other. I know this much for a positive fact: It was the vote of the farm women of our State that finally drove the saloon out of existence here, and that is stopping bootlegging. You see, we voted for a good man for attorney general; we got the right men for sheriffs in the bad counties; then we insisted on the enforcement of the laws. Laws are no earthly good, no matter how fine they sound, if officials do not enforce them without fear or favor. I used to think a law was far more important than any official. I've changed my mind since I started voting. I would a great deal rather have a good man enforcing a poor law, which did not go nearly



Before the women voted for a clean-up campaign

far enough, than to have a bad man ignoring, or merely pretending to enforce, a good law, no matter how far it went.

I really believe that farm women vote for the principle for which a man stands, rather than for any personality, much more than city women do. Often the city women know the candidate personally; he may be a neighbor or a friend; they have read of him for years in their local papers. The farm women do not have this advantage, or disadvantage. When the man is nominated he is often a stranger to them; they set about to find out who he is and what he stands for. A city woman may be induced to vote for a man because of friendly or sentimental reasons; a farm woman hardly ever does this. It is just because we are a little more isolated. We are no better thinkers, no better citizens, than our city sisters. But we pull the chairs around the reading lamp at night and read; our sisters in the city go to their near-by movies, to their bridge clubs, and so on. I never yet heard of farm women going very far wrong in their voting.

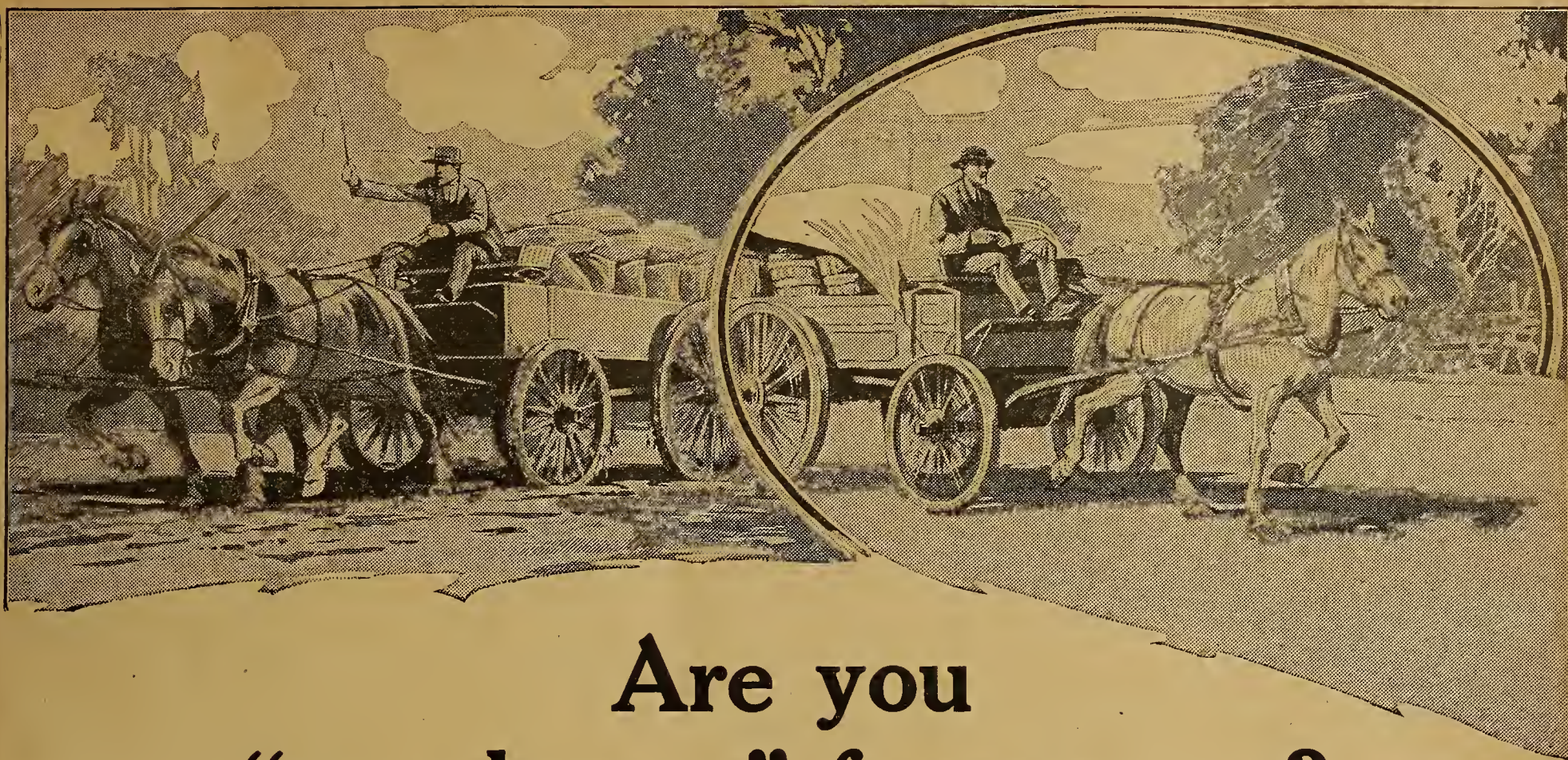
Personally, I have spent a great deal of time working in favor of child-labor laws. Now you might say, that is not directly applicable to the farm, for the smallest children work, at times, in the garden or chicken yard. But there's a lot of difference between this kind of outdoor work and toiling in a factory or sweatshop twelve or sixteen hours a day, without fresh air, sunlight, and good food.

I know one of the candidates mentioned me by name once, and said I was illogical and unfair because I was urging that children be kept out of factories and mills until they are fourteen years of age, and then not allowed to work more than eight hours a day until they are sixteen, while all the time my two children, aged twelve and fourteen, worked regularly, on Saturdays and in summer vacation, in the garden and fields. Well, all I've got to say is, if you could see the sunburn and tan on those children, if you could see how they eat and sleep after a day in the field, if you could see how they are developing as a result of that working, you'd never confuse farm work with factory work.

We have made some progress with child-labor laws in our State, and have started on the housing laws, but it will be years before we can carry out the complete problem. When it comes to whole families living in tumble-down shacks, between railroad tracks and town dumps, amid filth and disease twenty-four hours in the day, it makes me want to cry. We've elected several legislators who are pledged to go after these [CONTINUED ON PAGE 35]



Another view of the same place before the vote got in its work



Are you “two horses” from town?

“*WHAT* do you mean by ‘two horses from town?’” you ask.

We mean: Is yours a “two-horse road” like the one shown on the left—full of mud, ruts, holes and bumps?

Or have you a firm, smooth road—mudless, rutless and dustless—like the one shown on the right, that *one* horse can roll a load over with ease?

You know, of course, that the one-horse road is much *cheaper*.

“*How* do you make that out?” you ask.

It isn’t theory. It’s a proved fact. We don’t ask you to take our word for it. Read the report of an authority, Mr. C. H. Claudy, recently published in *The Countryside Magazine*:

“Statistics for a certain bad-road district showed the average cost for hauling to be 29 cents per ton-mile. *This is more than it costs to ship a ton of farm produce from New York to Liverpool under normal political conditions.*”

“*Yes; but I use an automobile.*”

All the more reason for a good road. Bad roads *ruin* automobiles. Good roads not only save wear and tear on autos but *they move your farm half-way to town by cutting running time in two.*

“*Yes; but how about the bond issue boosting my taxes?*”

Mr. Claudy discusses that, too:

“The argument of the man who has to pay for the road is that he can’t afford the bond issue because it increases his taxes. . . . But figures knock an argument like this completely out of the ring. In a county where the proceeds of a \$125,000 bond issue had been expended on roads, the average cost of hauling per ton-mile was cut exactly in half, that is, from 30 to 15 cents. *The actual saving in one year was \$124,970, or within \$30 of an amount sufficient to retire the entire bond issue in one year!*”

“*I know; but think of the maintenance cost of macadam roads!*”

You are quite right in objecting to paying for the everlasting maintenance cost of *plain* macadam.

That is where Tarvia comes to your rescue. The use of Tarvia re-enforces the road surface and makes it waterproof, frost-proof, mudless, dustless and automobile-proof. A Tarvia Road costs *very* little to maintain and pays for itself over and over again.

Many townships—whole counties, in fact—have proved this so thoroughly that they now use Tarvia on *all* their main roads, *to save money.*

In the face of these facts can you and your neighbors afford to use a “two horse road” a single season longer?

Illustrated booklet showing Tarvia roads all over the country free on request.

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In order to bring the facts before taxpayers as well as road authorities, The Barrett Company has organized a Special Service Department which keeps up to the minute on all road problems. If you will write to the nearest office regarding road conditions or problems in your vicinity, the matter will have the prompt attention of experienced engineers. This service is free for the asking.

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Not a cent to pay now. Just tell us to send this Majestic Garden Plow and Cultivator. Use it 30 days and then if not satisfied, return it and we pay freight both ways. If you keep it, send first payment 60 days after arrival—balance in five equal 60 day payments. Absolutely reliable but very simple and easy to operate. Great for farmer's wives and the boys and girls as well as grown ups. For hilling and weeding peas, beans, tomatoes, cabbage, corn or other crops planted in rows. Strong, but light. Well finished. (See description of parts at left of cut.) No better garden plow ever made. And only the coupon brings it. Order No. 453A MAY 106. Price \$4.90. Pay only \$1.00 in 60 days. Balance \$1.00 every 60 days.

The Hartman Co.
Dept. 1799
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Send the Majestic Garden Plow 453A MAY 106. I will pay \$1.00 when it arrives. I will pay \$1.00 sixty days after arrival and balance in 60-day payments of \$1.00 each until \$4.90 is paid.

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(CONTINUED FROM PAGE 7)

French are now interested in that plan, and are taking steps to increase their great nut-butter industry by adjustments at home and extension of trade abroad.

I realize that there is some very strong feeling among American dairy farmers on this subject of margarine, but I venture to include it in this article because I believe that the time has come for everyone to try and look at matters without prejudice, from the new viewpoint of our merchant ships and world trade.

We built these ships to win the war. But they must be kept going in peace times, serving ourselves and other nations—both those which buy from us and those which have commodities to sell in return. We can't tie them up to the dock, nor send them cruising around empty. Every American industry must plan and produce for world trade, to keep our ships filled and busy. The American farmer has a big obligation in this matter as well as a big opportunity. Looking beyond special and local interests, you should think nationally and internationally. Your country calls upon you to study world trade, and by team work with the manufacturers who take your raw material and work it up into exportable form, and the merchants and salesmen who take it abroad, to help fill our new merchant ships, and once more make America a real maritime nation.

WE SUBMITTED Mr. Hurley's article to one of the largest milk products manufacturers in the country and received the following comment:

"Mr. Hurley states that 'in 1915 about 50,000 American dairy cows produced all the milk that went into our exports of dairy products.' Our records would indicate about 224,000 cows.

"He also states: 'To-day, nearly 500,000 cows are required, so great has been the expansion of world business in this line, figuring 4,000 pounds of milk annually per cow.' Our records show approximately 566,000 cows are required.

"He also states: 'In 1913, only 17,000 cows produced all the condensed milk we sold abroad.' We believe 11,000 cows would be nearer the mark.

"The article reads: 'Between November, 1913, and August, 1914, Europe sent to this country 100,000 cases of tinned milk, most of it in the nature of 'fealers' in our markets. Much of this was cut off by the war, still neutral countries like Holland, Norway, Denmark, and Sweden have sent considerable canned milk to our markets for the past few years, maintaining their brands as a basis for after-war business—which is good business.' As a matter of fact, Europe sent to this country during the period mentioned 120,000 cases of tinned milk, and we are inclined to think that Switzerland should be substituted for Sweden.

"With reference to the third paragraph, third page, the American manufacturers were then paying on an average of \$1.56 instead of \$1.36 per hundredweight for raw whole milk, and taking 1,300,000,000 pounds of it yearly, instead of 1,300,000 pounds as stated in the article. On second page, third paragraph, article states our world trade in condensed and evaporated milk had jumped from 18,000,000 pounds in 1914 to 528,000,000 pounds in 1918. We should say that it jumped from 16,000,000 pounds in 1914 to 530,000,000 pounds in 1918.

"We feel that the figures we have given are nearer the exact conditions than those used by Mr. Hurley. Aside from expressing the foregoing, we have no comment to make on the article; nor would we wish any publicity given to our communication."

Just before going to press we received word from Ed C. Lasater of Falfurrias, Texas, that he would write a reply to Mr. Hurley. We will print it in an early issue.

THE EDITOR.

Roughage for Cows

A GOOD milk flow results mainly from a careful feeding, although shelter and other phases of management are also important. The man who is getting poor results is usually feeding timothy hay, corn fodder, and corn, and perhaps not even enough of these. The man who is getting good results has learned that such a ration will not enable a cow to produce milk enough to make it profitable, and feeds plenty of clover, alfalfa, or cowpea hay for the roughage, and some corn fodder in addition, if he has it.



When the Boy comes Home

He has seen a lot of the world since he first put on a khaki uniform.

He has become used to city and army life—electric lights, running water, shower baths, and all that sort of thing.

The old farm will look mighty good to him as he swings through the gate.

But it must be kept looking good.

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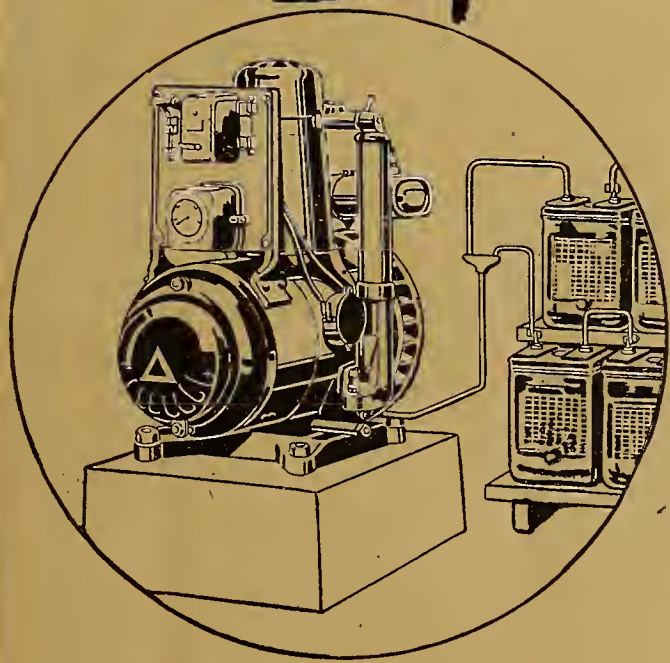
Provides just the comforts and conveniences necessary to make the young folks stick to the farm.

Electric light throughout the house and barn—running water everywhere—Power to operate the washing machine, cream separator, churn, grindstone, etc.

Saves so much time and labor that it actually pays for itself.

Over 70,000 satisfied users

THE DOMESTIC ENGINEERING COMPANY, DAYTON, OHIO



A complete electric light and power plant for farms and country homes, self-cranking—air-cooled—ball-bearings—no belts—only one place to oil—Thick Plates, Long Lived Battery RUNS ON KEROSENE

Getting Six Per Cent from Your Tractor

[CONTINUED FROM PAGE 18]

safe load for it under varying grades and in different soils. The salesman should know, must know, if he is in the business to stay. If he doesn't know, he should be asked to write to his concern: the engineers who have designed the tractor will be only too glad to tell the buyer all about this problem if they haven't already prepared a leaflet covering this very essential point.

"Just as the tractor operator must keep in mind the fact that his tractor as designed is capable of developing a certain maximum efficiency under intelligent handling, so he should remember that every gallon of fuel poured into it has tied up in it a certain potential power. It's up to the operator to squeeze the very last decimal of this from the gas tank and deliver the highest possible percentage of it to the drawbar.

"He can hit close around this efficiency score if he keeps clearly in mind the picture of what happens to the power which is tied up in his fuel. After the charge has been vaporized, compressed in the cylinder, and exploded by the spark, it drives a heavy blow against the piston head. That's the moment when the power is freed, and from there it must be transferred with lowest possible losses to the drawbar.

"The first duty of the power released by the explosion is to turn the crank shaft by driving the pistons down. Then the power must flow into the gears, then to the rear axle. Other parts of the engine vital to its operation as a unit have got to be kept moving. So before he gets any drawbar power he must figure on quite a percentage

"Man is given five senses—seeing, hearing, smelling, feeling, and tasting. He has use for most of them when operating an engine.

"He can hear the exhaust—a too short crack instead of smooth operation indicates a loss. His ear will tell him the correct point of ignition—let him advance his spark until he hears a slight ping. A squeak or rattle indicates something is wrong—a loose nut or bolt or rivet.

"He can watch the exhaust and see smoke—white, blue, or black—which tells him much relating to lubrication or carburetion. He can smell the exhaust and realize when something is wrong with the outfit's mechanism or operation. He can feel the temperature of the exhaust pipe and the vibration of the engine, or the overheating of a bearing.

"Be awake and let the engine speak to you! When the engine wants more fuel it pops up the intake or explodes in the exhaust; when it has too much, black smoke issues from the exhaust; when it wants water, it pounds; when it labors hard, it may want less load or a better adjustment of the spark; if it operates in a dull, listless, weary way, perhaps the lubrication is bad or the compression poor.

"The best automobile driver, airplane man, engine or tractor operator, is the one who makes use of these senses or points, because it is he who must get the last ounce of power from the fuel."

"The question of fuel supply for internal combustion engines has long been an acute



Make your Ford Transportation even more Economical.

NEARLY a million Ford Owners have found that maintenance and tire costs are reduced approximately 30 per cent and a large saving is made in fuel by the

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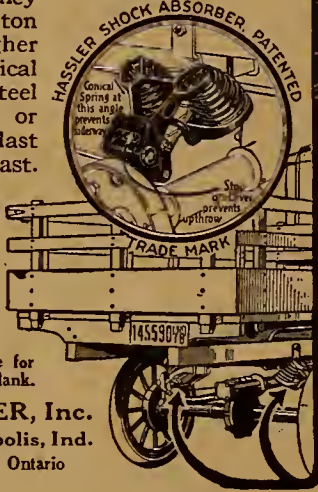
They protect riders from disagreeable shocks and jolts—make any Ford ride as smoothly and comfortably as a \$2,000 car. They make the car safer, preventing sideways at high speeds. The same shocks that disturb the passengers, also rack, strain and wear out the car. Hasslers prevent squeaks,

rattles and deterioration. They make a Ford car or a Ford one-ton truck last longer and give it a higher resale value. The spiral, conical springs of chrome-vanadium steel compress on either upward or downward movements. They last and make the car or truck last.

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He'll also reline the low speed and reverse bands with Cork Insert. Your Ford will then go into low and reverse without that jump and lurch. The three strips of Advance Cork Insert for relining the three bands come ready to install in the red and black Cork Insert box. Be sure to get Advance Cork Inserts for they will give you a better working Ford—keep your brake sure and save you money.

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It tells how the Ford brake and clutch work and how Cork Insert makes them work better. Get this book and post yourself on things you ought to know. Write for the Free Book today.

Advance Automobile Accessories Corp.
Dept. 36, 56 E. Randolph Street Chicago, Illinois



Prize Contest Announcement Handy Farm Devices

IF YOU have worked out a simple scheme to save time, labor, or trouble on your farm, sell it to us and let us pass it along to the other fellows so they can use it too.

We will pay \$5 every month for the most practical time, labor, or trouble saving idea sent in by a farmer; \$4 for the second best, and \$3 each for all others we accept; and \$1 extra for a good picture or drawing of the device. If you enclose postage we will return suggestions if we can't use them.

The only conditions are that the idea *must* come from a practical farmer (you needn't be a subscriber), and it *must* have proved its value to you in your work.

The first winning devices will be printed in July. They should reach us not later than April 20th. Keep your letter to 650 words. Address Contest Editor, FARM AND FIRESIDE, 381 Fourth avenue, New York.

THE EDITOR.

of resistance to be overcome in the task of merely keeping the engine going.

"Under the best possible lubrication there is always a certain amount of friction to be overcome in this operation. Of course, this subtracts its toll from the original motive force generated.

"Heat is a form of energy, and every tractor operator knows that the exhaust pipe of his machine gets hot. Here is a loss which is inevitable, though it can be kept down to where it belongs under good management.

"And every tractor operator knows that the engine must be kept cool enough to prevent bearings becoming overheated. This is partly cared for by the cooling system. Here again heat generated by the explosion is lost. After these losses have occurred, the remainder of power is available for real work at the drawbar.

"It's plain enough that while all these losses are necessary, they can be kept down to a minimum. Friction losses are greatest under imperfect lubrication and when bolts and nuts are allowed to work loose. Exhaust losses are greatest when there is faulty feeding or mixing of the fuel before the charges are ignited.

"All these points may sound very elementary; you probably expected to hear something more complicated and technical from a designing engineer: but they're the very points which lie at the bottom of designing, and the very things which spell the difference between profit and loss in the actual operation of the tractor. I used to try to impress these points on our salesmen when I was delivering lectures. When it came to the problem of getting the greatest possible efficiency from fuels, I put it to them in this way:

one—particularly as regards the supply of gasoline. The shortage of this fuel is what gave impetus to the development of the kerosene-burning tractor. My advice to a tractor operator would be to use for kerosene-burning only a machine which has been built for that fuel, though of course there are modifications in feed and carburetor systems which may enable him to switch from one fuel to another in the same engine. But the point I want to make is that the character of the fuel to be burned has a decided influence on the design of the engine, and the best burners of kerosene are engines which have been designed primarily as kerosene burners.

"There is much room for improvement of liquid fuels—much room for better grades of gasoline. Personally I lean strongly in the direction of industrial alcohol as a coming cheap, efficient fuel for internal combustion engines. But at present the costs of manufacturing alcohol, together with the tax charge, make the general use of this fuel prohibitive.

"And there is just as much room for improvement of the tractor, but this progress is necessarily slow. Only from year to year, under actual operation in the field, can the lessons be drawn which must influence the design of forthcoming more efficient machines. The future of the tractor from the standpoint of efficiency in design and operation rests almost as much with the operators as it does with the designing engineers themselves.

"Operators when they give their machines such treatment and management as extracts from them the maximum of efficiency are co-operating to a tremendous extent with the designers who *must* go to the field to get new ideas or modify old ones."

When Your Child Must Face Pain

By Mary K. Best

WHEN the doctor advised me to have Nancy's adenoids and tonsils removed, I realized that a serious problem confronted me. She is a nervous, high-strung child, abnormally sensitive to pain. I dared not send her to the operating table without some preparation for the ordeal through which she must pass.

My first impulse was to promise a reward if Nancy would submit quietly to the operation. But I wanted to make this experience count for character-building, to strengthen her in some small measure for the dangers and difficulties of a woman's lot that she must face later on.

So I talked to her cheerfully about the operation, frankly acknowledged that it would hurt for a while, but explained that the pain now would save her from a great deal of trouble and suffering later on. I dwelt upon the kindness of the doctor, who had a little girl of his own at home, and who loved all little girls and wanted to help them become strong and well. I described the good nurses, and the hospital with its beautiful white walls and comfortable beds; and I promised to stay with her as much as possible while she was there, and told her how proud and happy I would be if she were brave.

As a result she walked into the operating-room rather timidly, but voluntarily. And during the suffering afterward she did not reproach me.

In the next room to ours was a little boy, an only son, whose parents had lured him into the hospital by telling him he was going to the seashore. When they arrived, the child was carried screaming to the operating-room and instantly etherized. When the operation was over, he screamed and thrashed around in bed, raging and scolding like a little caged animal, working himself into a fever.

Did this child come out of the ordeal strengthened by his pain? Or did he come out having less confidence in his parents'

word, and with a feeling of resentment against them, springing from the fact that they had deceived him?

Surely it is the duty of every mother to help her children bear pain by fortifying them against it. Pain is an instrument of higher discipline for humanity; to try to avoid it for one's children is to produce moral flabbiness where they most need strength.

A Homekeepers' Profession

By Ragna B. Eskil

I AM a woman sixty-five years old—or rather young, for I won't be called old until I'm useless. I own my own house in the town where my children were born, and I have an income that, with painstaking economy, would suffice for my actual needs.

But I wanted to do something that would occupy me more than my little housekeeping and social visiting would do, and also perhaps bring me a little money, so I hit upon this plan: I told my acquaintances who had children that I'd take care of the children for them when they wanted to go out in the afternoon or evening. They were only too glad to take up my offer, and I soon had to refuse requests for my services. I charge 50 cents for an afternoon or evening, and I often make \$5 or \$6 a week, besides having my mornings to myself, and time for my own social calls.

The work is very congenial. I have not lost any caste on account of it—every one in the town now regards me as the teacher-guardian-grandmother of the children. And sometimes, if I do not feel like going out, the children come to me. I am quite happy, and I believe that many other women of my age would be equally happy in doing the same thing.

The Victory Loan and the American Farmer

WE HAVE small patience with those shallow-minded persons who believe that farmers must be spurred on and pleaded with to get them to do the right thing.

We are sickened and disgusted with the drivel that has been handed out by men who should know better, to the effect that the farmer is a stupid tight-wad who must be belted over the head and compelled to subscribe his share to this present loan.

What blithering nonsense!

These puny reasoners are the selfsame fools who went about at the beginning of the war shedding crocodile tears over the fact (?) that the farmers of America were not interested in the war.

These gentlemen forget that the American farmer has a mind of his own. And they do not in any measure appreciate how very good a mind his is. They do not realize that the farmer has more time to think, and more things to think about, and more absolute necessity for thinking, coupled with the calm and quiet environment that is essential to clear thinking, than any other citizen. And they are fooled, by the farmer's failure to handle his thoughts with the agility of a jay bird and to blurt out unsound conclusions at a moment's notice, into believing that he *can't* think.

The American farmer does think, very soundly and very thoroughly. He thought out his stand on the war, and his share in it, more ably, and he put it through more determinedly and more completely, than any other group of American citizens.

You don't need to wave any flags, or play any brass bands, or have any parades, to sell something to him. He can make up his mind without them. And you don't need to deluge him with posters, or flabbergast him with arguments, or appoint committees to wait on him to explain what a wonderful investment this Victory Loan will be. He knows all about it.

The American farmer has done his thinking about this loan. And he has made his decision. He will invest in it all he can. Not because of the rate of interest, though that is undeniably an inducement; nor because someone keeps bawling at him that it is the patriotic thing to do; nor because he wants to go around and brag about it afterward; nor for any other reason than that *he is convinced this loan is the right and necessary method for the Government to use to get this money, and because he knows that the Government needs the money in its business, which is also his business.*

That is our answer to the well-intentioned though misguided gentlemen who have urged us to beg the farmers to buy of the Victory Loan.

THE EDITOR.



PURITAN

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Hairbreadth Escapes



NOT many of us can die and live to tell the tale. But Murtha Bernice Carr of Denver, Colorado, did. Murtha took an anesthetic for an operation, and died four minutes later. The doctors pronounced her dead for sixteen minutes. When she appeared to be coming to life they began to beat her up. They said it was what she needed to bring her to, but others say it was because she contradicted their opinion that she was dead. Murtha says she'll try it again some day.



GEORGE ROONEY woke up from a sick spell at Camp Sherman to find a metal tag on his left big toe ordering him to the undertaker to be embalmed. George was too weak to do anything but wag the toe. The nurse saw, fainted, recovered, rushed in doctors, who gave him sixty-three injections of strychnine. Even that didn't kill him, so they decided to let him live and go back to Lafayette, Indiana, where he resides today, by the grace of Providence and the wiggle of a toe.

COWBOY BOB SANFORD of Oklahoma has had almost enough hairbreadth escapes to comb. Fell into a river at sixteen, and was caught by a trotline a mile down stream. Charged by a bull and saved by a dog which bit him—the bull, not Bob—on the nose. Jumped just as his runaway team took a 90-foot cliff. Knocked off a windmill by a fan blade, and fell on a load of hay. Dropped into an old well with a rattlesnake, killed the snake, and was hauled out with a lasso, only to be shot at by cattle rustlers.



WHEN William Sampson, then serving as General Slesinger's secretary in Nashville during the Civil War, went for a horse back ride one morning, he was chased by a train. A railroad bridge was the only one left, and Sampson was crossing it when a military train rumbled up behind him. He set spurs to his horse and reached the embankment just in time. His horse lost its footing and tumbled into the river. Sampson slid off backward, landing within a few feet of the passing train.



GEORGE P. THOMAS of Halifax, Nova Scotia, really doesn't deserve to die a natural death, after all the fool chances he has taken; but nothing else seems to be able to kill him, and that hasn't succeeded yet. Thomas is the man who sailed from America to England in a 13-foot skiff in 1880. And back again! The boat was only 27 inches deep. Both ways, he sailed 6,000 miles, and it took him 144 days. He ran out of food and water both trips. Lucky for him he didn't meet a wave.



THE hairbreadth this man escaped by was very narrow. About the width of one fuzz on a bald man's head, we'd say. He is Captain Alfred F. B. Carpenter, the Britisher who piloted the old "Vindictive" into Zeebrugge harbor under a million blazing German guns and sunk her to pen the U-boats in. Three machine-gun bullets clipped his coat, his cap flew away with a cannon ball, and his binoculars were shot out of his hand. He wasn't touched. Hundreds of his men were killed.



A TORNADO swept away P. S. Rich's \$10,000 farm in southern Indiana, and left him standing. He was just out of college and just married, and to see nothing but trash and splinters left of 125 acres of timber, 60 acres of corn, and 60 acres of wheat, live-stock dead, three barns vamoosed, and his house tossed away, was pretty hard. "But," said Rich, "when I learned that the same tornado killed fifty people in Cincinnati two hours later, I considered myself darned lucky."



THIS is Mr. Percy Cook, son of William Cook, the original of the Orpington chicken. On a three-months lonely trip in the jungles of South Africa he was knocked down by a leaping leopard. The creature was just drawing back to swat him when Cook shot through the heart with his revolver. Next day he accidentally killed a billy goat belonging to a native, and was condemned to death. He begged off.



THIS is as near as Bert Lytell ever came to a hairbreadth escape. He is a movie actor, therefore all his hairbreadth escaping is done for him by a dummy. When he has to fall off a mountain he just leaps into the air, has the camera shut off while he's up, then has it turned on again while a straw man with his clothes on does the falling. We hate to tell on you, Bert, but this is a journal of truth—and that's one thing you can't escape when you deal with us. Boy, page Demosthenes!

JAMES CHAPLIN (no relation to Charlie, but a movie actor just the same), making a film down in the Ozarks, was supposed to be shot by his rival for the hand of the mountaineer's daughter. He actually was shot. The rival "didn't know it was loaded," and another actor finished the film. Fortunately, the bullet struck Chaplin's gun barrel and glanced into his right shoulder. It was headed straight for his heart. So it appears, despite the mean things we said about Bert Lytell, hairbreadth escapes actually do happen in the movies.



A Plea for the Old-Fashioned Garden

Where one hollyhock may lift its head above the others without fear of losing it,
and where all is not straight lines and acute angles

By Warren Wilmer Brown

WITH the removal of the heavy burdens imposed by actual war conditions, flower-raising—the joyful art of gardening for the sake of gardening—can be resumed this spring and summer with renewed love and enthusiasm. We can buckle down with light and happy hearts to the duty of planting to make victory finer, more secure and, what is most needed in these days of relaxation and readjustment, more beautiful.

In discussing the culture of flowers, different considerations must be taken account of, according to the viewpoint selected. It is well to note right at the very start that in planning a garden, whether of perennials or of annuals, much time and energy may be saved, and no end of disappointment avoided, if a definite purpose be formed, and kept constantly in mind.

Thus, the methods to be followed in planting for a general decorative effect must be wholly dissimilar from those regulating the garden devised for the production of individual specimens. Neither should the means used for raising flowers for the market be employed in the home garden, where refinement and good taste must be everywhere apparent.

In other words, select the sort of a "career" you wish your garden to follow, and then let there be no deviation into by-paths of cross-purpose. The beginner, of course, must make up his or her mind to many and varied discouragements. He must resign himself to all sorts of erratic weather "carrying-on," notably for the outrageous deceits practiced by those untrustworthy suns of early spring.

By prayer and resignation he will eventually come to take as a matter of course the fact that his particular plantation is the spot in the proverbial long road chosen by all the worms in creation as their turning place; that his plants are not only the haven of all known insect destroyers, but, also, that they daily develop new and astonishing species of their own.

Not only does gardening ripen one's acquaintance with villains and thugs of the insect world, but it also develops a knowledge of the physical and temperamental habits of birds that, far from being reassuring, creates enduring suspicion.

There's the robin for instance. Though doubtless a sweet bird, it is not by any means a *rara avis* where prophetic utterances on the weather are concerned, and facts prove over and over that his cheerfulness is all too often sheer idiocy.

Who hasn't seen a Red Breast flaunting himself on a bare bough in March, proclaiming to the whole world that he has been authentically informed that summer is just around the corner, and that cherries will be ripe in five minutes.

All I have to say is, don't take that robin as a guide for your seed-planting operations, for, like as not, before his beautiful utterances have been heard by the sparrow busybodies in the next tree, a bitter blast of wind and snow from the ironic north will convert him into the very image of birdly woe and despair.

Well, it doesn't take the gardener, no matter how much of a born amateur he may be, long to learn that he cannot depend upon oracular birds, the promise of friendly skies, or even the statistical records of official bureaus, when it comes to putting tender seed into the ground.

Experience is the only dependable mentor, and even that, alas, often proves a delusion and a snare. "Plant after all danger of frost" is a familiar bit of instruction, and in following it many have waited until mid-June, and were then rewarded by having their most cherished plants succumb to one of our arctic mid-summer nights. No wonder the gardener often says, in the bitterness of his heart, that nature has selected him as the butt of her audacious, crude jokes, thereby overlooking thousands, nay, millions, far worthier of her dubious attention!

But after all is said and done, after the disappointments, the anxieties, and the failures are all accounted for, there is

nothing that supplies purer enjoyment and deeper content than gardening.

A garden, whatever its type or its purpose, should be started first of all in one's mind long before a stroke of work is actually done. It is a good plan to sit

so to speak, in a covey, or even a horsey, vicinity, and in that case commercial fertilizer must be substituted. Pulverized sheep manure is excellent—provided you do not have the experience I had last spring in getting 25 per cent of the original

nicely manicured and marcelled affair that one so often encounters, where every blessed plant is snipped off to the same height, where one hollyhock dare not lift its head above the other for fear of losing it.

Such efforts are dull commentaries of an entire lack of imagination and poetic temperament on the part of the person who created them. They tell of minds that think only in terms of straight lines and acute angles; that know nothing of the fascinating charm of soft irregularities of foliage and flower; that are dumb to the appeal of anything that cannot be expressed with mathematical accuracy.

Do not be afraid of a bit of fantasy in your garden. Nothing can give it greater interest or can emphasize its individuality as much. Introduce broad, sweeping curves in your borders where space is ample, and gentler, less salient ones where it is restricted.

Avoid above all things geometrical patterns in planting your beds, and give up the idea of flowers altogether if there is no place in your garden where they will grow but the center of a lawn or grass plot.

Nothing is in worse gardening taste, nothing indicates more conclusively a commonplace viewpoint, than an isolated flower bed that establishes no relationship with its surroundings. In other words, the garden beautiful is a composite of results achieved by consideration of its parts in their bearing upon one another.

While stiff and formal effects as a rule should be studiously avoided in the modest, unpretentious garden—many of us will have nothing to do with them under any circumstances—there is no excuse in the world for permitting slovenly conditions and careless arrangement.

Tall-growing plants should be staked soon after they are well out of the ground, and if any one individual chooses to violate the traditions of its family its tendencies should be curbed early in the game.

Many hybrids, notably among dahlias, after a few years show an uncontrollable longing to revert to type, as the scientists say. When they get that notion into their heads the amateur might just as well yank them out of the ground and cast them away.

Plant psychology and heredity are very absorbing subjects, but they come within the range of the botanist, and need give no concern to the person who loves flowers for themselves rather than for the science that is in them, except in so far as he profits by his personal observations and experience.

It would be idle for the non-professional to attempt breeding new species. Leave that for the spectacled hybridizers, and those impudent and brilliantly successful little rascals, the bees. Keep an eye on the seedlings of your annuals, and also of your perennials, for sometimes they will develop a new color or type.

While massed effects of color are always desirable, it is possible to overdo the thing, and I for one am no stickler for close harmony of tones. Contrasts in a flower garden are invariably piquant and stimulating, and complementary colors are delightful when planted together.

The gorgeous marigold *El Dorado* is particularly valuable where a bold, vigorous accent is desired. Stunning effects may be secured by using it as a background for any of the clear red zinnias.

Let it be carefully noted, however, that no such aggressive contrast as this should be attempted unless there is an abundance of adjacent foliage.

Green supplies a "medium of communication," so to speak, that pulls together the most antagonistic colors. A very lovely combination, introducing approximately complementary tones, may be obtained by putting dwarf Newport Pink snapdragons against the Queen Wilhelmina delphinium.

Pale pink and pale blue phlox form an exquisite, though not very assertive, harmony when heavily massed. A tracery of the white varieties adds a very effective note.

[CONTINUED ON PAGE 35]

She Made a Blooming Vagabond Behave

By Myrtle Shepherd Francis



THE one flower I never cared for was the petunia. It was a tramp, a bum, a vagabond of the garden. It was sticky, it was smelly, it was magenta, and I hated it. But I have never disliked any work in my life without some time having it to do, and I have always ended by liking it. It was so with petunias.

My mother, the late Theodosia B. Shepherd of Ventura, California, was always behind with her petunia orders, so it fell to me to give special attention

to petunia seeds. I worked among them during endless weeks and months, forcing them to seed artificially, and I began to dream of making the double petunia seed naturally, to lengthen the stem of the blossom, to exchange the form and the color—in short, to make over this garden vagabond.

And so in time, by constant rogueing out of those that had no part in my scheme of creation, by searching among thousands of blossoms for the most perfect organs of reproduction, and dusting with a fine brush the pollen of one certain blossom on the stigma of another with a certain definite purpose of form and color, after ten years of work we achieved not only the miracle of making the double petunia seed naturally—a thing scientists the world over have been trying for years to do—but developed a half-score of wonderful varieties of petunias of all shades, from pale lavender to royal purple, from rose to red, and one single long golden-throated white flower measuring five inches across. Some of them might be mistaken for carnations or orchids, but never for the offspring of the ugly, old-fashioned garden variety of petunia save for the odor. Even Luther Burbank says he would not have believed such petunias possible without seeing them.

I seem to have inherited this knack with flowers, as my mother developed rare species of begonias and daisies and dahlias, double sweet peas, cosmos measuring four inches across, and the famous Golden West poppy with a Maltese cross in the center.

down with a notebook and pencil and make a sketch of the scheme. Divide up your bit of ground, and then decide just how you want the different parts to appear individually and as a whole.

Of course, the eventual results will doubtless be miles away from what you had expected; but, at any rate, you will achieve something of your aim, and will have the satisfaction of knowing you made an intelligent start.

Prepare the ground for tilling amply in advance of the first whispering of the violets, or, better, before the crocuses start their giddy gossiping. All of the debris of winter—what the textbooks and treatises call "light protective coverings of leaves and litter"—should be raked up and burned. It often harbors insects and germs of plant disease that only the flames can quickly destroy.

It is foolish to think of starting a garden with poor soil. This is a platitude that, like many others, is not heeded as much as it should be.

One of my neighbors once decided to go in for asters. He had nothing but clay top soil and brickbat subsoil. He was argued with, but to no purpose, so he sent away and got the most expensive aster seed he could find. He raised an exquisite crop of plantains, but he could not see their beauty and wanted to sue the seed house he patronized for misdemeanor, or something or other.

If the soil be impoverished, or if it be just of the naturally "ornery" variety, it must have a good dressing of fertilizer. Cow manure that has succumbed to the elements (I like this phrase much better than the hackneyed "well rotted"—don't you?) is best. But one does not always live,

and 75 per cent of the by-product of a box factory stained to harmonize.

Subject your soil to the litmus test, and if acidity be indicated apply lime; but remember not to put it on at the same time as the fertilizer, as valuable chemical elements will be lost.

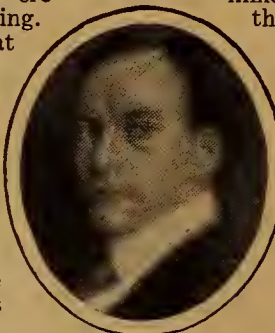
A compost heap is a veritable garden redemption. Select some out-of-the-way spot and keep it piled up with bits of sod, decaying vegetable matter, manure if available, and sand. The compost heap should be turned over and thoroughly mixed, and after it has "ripened" thoroughly it furnishes the best possible potting and seed-pan soil.

Before planting, the ground must be dug as deeply as possible; the clods must be broken up, and the surface rendered perfectly smooth. This is not only necessary when seed are to be put in, but plants already in the ground, perennials, shrubbery etc., benefit greatly by early spring cultivation around the roots. Loosen the soil thoroughly, dig in some sort of plant food, and better conditions in crowded quarters by transplanting.

It would be out of the question to undertake a dissertation on commercial flower culture here. That is a subject which requires more or less academic treatment, for it is more in the nature of an "exact science" than any other kind of gardening.

The garden that makes the most precious appeal is that of the home, or the sort that makes beauty spots of back yards and that gives a place, no matter how unlovely its environment, an air of distinction.

The garden I have in mind is not the



Photograph from F. F. Frittita
Warren Wilmer Brown
He lives in Maryland

"Should Farm Children Stay at Home?"

First Prize

BORN in the city of Chicago, raised there to the age of twenty-one, I met and married a country lad; therefore with my twenty years of farm life I have had experience in both lives. I'll put it shortly and frankly before you:

If only for the sake of the health of my children I would a thousand times rather live out in the country than in the city. A city child in ordinary circumstances has little opportunity for acquiring health; a country child every. Look at my children. They have the best of food—fresh milk, eggs, vegetables, meats. I've never feared that they would grow up awkward in the presence of city folks; I've seen to that. Every winter my children go to the city and attend school there—they live the city life. In the spring they come back home to me, and live the healthy country life. The result—they are at ease at all times and places.

The country has developed, not retarded, my children. They have more life in them, more ambition, than any city child has. John, the eldest son, is seventeen years old, and he's a thorough business man. He has his city route of customers to whom he delivers milk and butter every day, and fresh vegetable customers who purchase all the vegetables he can raise.

The second son has made timber his object. But fifteen years old, he has bought and sold timber land; has superintended the cutting down of trees and sawing and planing of same.

My daughters have taken to the kitchen and the chicken yard. Last year, with the help of an incubator which they purchased from their own funds, they bought and successfully raised 1,400 chickens during the spring and summer months, sold 120 dozen eggs and over 300 pounds of butter.

Part of the money earned goes into their savings accounts, part goes in for machinery and necessities to further their business, and the remainder goes for educational and pleasurable ends. Last year the boys each bought themselves a violin, on which they have been practicing constantly. They purchased a talking machine, its records, and a camera. The girls got their longed-for piano and a new cream separator.

Every year in the spring the children make out a list of what they want to get for the money they hope to earn during the season. Never have they failed to get what they wanted.

Another great advantage in favor of the country: I have the children constantly at my side; I learn to know them as no city mother can, for city children run about more. My children are companions who come to me with their troubles and their worries, and reveal to me their characters.

My husband has his fields and crops to see to, that is all; the rest is in the hands of the boys and girls; and the four children are like four high-priced labor hands—they give the best that is in them, and then don't grumble.

Slowly our library—an off room built by the boys—is filling up, shelf by shelf, with books, books covering every subject, with agriculture in the lead. My children lack not education—they lack nothing and have much in store for them. I am perfectly satisfied to have them country folks as long as they live; they are making such a success of their lives and take such a genuine liking in all they do—the real spirit to win success.

L. S.

Second Prize

LET the children go out in the world if that is their desire. If they find their places in it, all good and well. If they do not, it will act as a good antidote for their waywardness.

When I was a boy, farm was but a synonym for *torture*. Its beautiful meadows and gently rolling prairies were but parade grounds for my imaginary armies, over which I rushed as Ghengis Khan, or some revolutionary chief in a fierce endeavor to overthrow the Czar.

The time came for me to throw off the shackles of farm drudgery. I rambled around the country, through most of the States, tackling most every sort of job, and in the end finding myself no better off financially, and thinking less of myself and my career in general. To escape my ennui and the trial of returning to the

hated farm I cast my lot with Uncle Sam's marines.

Because of the wide experiences of a marine I have never regretted this step. In that splendid corps I sailed the seven seas; touched most every tropical land where insurrection and *vino* go hand in hand; drifted as in a dream through the intoxicating beauties of the inland seas; or walked post on the Tartar Wall of Pekin, amid the swirl of sandstorms and the weird jargon of a great Oriental city.

Strange that in that strange land I should first begin to see the light. I was with the first half of my company on its first hike to the Great Wall. No man ever beheld the Great Wall of China who didn't think bigger thoughts because of it. I had read the historians' reasons for the Great Wall, but they didn't suit. In it I saw God's plan for the whole human race. My mind passed the end of the Great Wall and ran along the Great Divide which cuts the Eastern Hemisphere in two; past China, India, ancient Babylon, Greece, and Rome. On the south of this divide every civilized nation was born. Why? The semi-tropical climate, the fertile valleys, afforded the best place for the advent of farming. With permanence of location grew up all our institutions of learning. Here the ancient barbarian merged into the civilized man. Farming, not the printing press, was the Mother of Civilization. To me this took the form of a religion.

From the occupation of Vera Cruz I came back and became a civilian once more. I rushed home to the old farm. I took my part of the lands and estate. A careful reading of Bernhardt's "Germany and the Next War" made me realize the tremendous power of the Teutons. I became a wheat and dairy farmer. Money has flowed to me as it never flowed before. And I have seen the farmers of to-day save that civilization which cost the world ten thousand years to erect. Little wonder that farming is my fetish and greatest happiness!

G. A. M.

Third Prize

YES, they should be taught to respect the business of farming, because the average girl or boy from the country will not better their position in life by forsaking the farm for the city.

I was born and raised on the farm, but shortly after taking my first shave I decided to cast my lot with the city. The game is hardly worth the candle, competition is too strong—too many consumers and not enough producers. In the city there are too many time clocks to punch, too many slim pay checks, too many petty jealousies, and entirely too much striving to appear more clever or more successful than one's neighbor.

Yes, I know what it is to sell goods from a sample case, and I know how it feels to be a sales manager; and from such experience I have learned that with the effort necessary to make a success in the city one can make a bigger success in the farming game, if the heart is in the work.

Out here I am absolutely my own boss, and that means a lot, especially to one who has worked under the man higher up.

Out here everything is my friend; the cows, the calves, horses, chickens, and even the trees and grass, are working for me—making money for me.

It is my intention that our boys, aged five and eight, shall like farm life. If I live I am going to see to it that they receive a good education, for an education does not come amiss even on a farm.

When we drive to the city, wife and I point out to our boys the fact that the money with which we buy our pleasures was made at home on the farm. We tell them that thousands of little boys who live in the city do not have the opportunities to have a good time which is theirs because we live on a farm.

When our boys go to town they are as well dressed as are the boys of the average city man. Why shouldn't they be?

We farmers must manage some way to educate our boys to stick to the farm. In the last ten years entirely too many farm boys have wended their way cityward. Of course, many of them are doing well there; but are they doing as well as they would if they had stayed on the farm? It seems to me as if farming is offering exceptional opportunities to the hustler these days.

R. A.



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What Sort of Mind Has Your Child?

By Helen Johnson Keyes

THE test of good teaching to-day is to interest the child. I love to think how many children from generation to generation have been too bright, too intelligent, too spirited to endure patiently the deadly dullness of lessons which had no relation to anything which had ever entered into their lives or ever would do so. How often, in the past, life made the boy of whom the school master despaired into a genius! Schools are becoming more like life. There are no dunce's caps in them any more, and by and by we shall find that there are few heads on which they would fit. Then schools, like life, will develop geniuses and recognize them.

There is always some way of interesting a normal child and of teaching him a number of valuable things. In the elementary grades, it is true, there cannot be a wide choice of subjects to suit the individual child, for all youngsters must learn the three R's and a little geography and history. But although there is not a wide variety of subjects to offer the pupil, there is a wide variety of ways in which these subjects can be taught, so that every pupil will have his interest aroused. The teacher with the ability and opportunity to find out which way suits which pupil is the real teacher. She it is who will have in her classes at the end of the term the smallest number who could wear dunce's caps.

How Their Minds Work

A few children learn readily from text-books. They can concentrate their attention and remember accurately without requiring to be interested by special methods. More children, however, need to have something personal put into their lessons, something related to themselves and their homes, in order to fix their attention and memory. To do this is not the same thing as making their tasks easy: they may have to work exceedingly hard over them, but they are glad to do so because the problem seems real and useful, and to concern not life in the moon, but their own experiences. Contrary to general belief, children can work very hard, and for long stretches of time, if their interest has been excited.

We have discovered that there are three different ways in which children remember things:

Some remember by making pictures of things in their minds and recalling these pictures. When they try to spell, they see the words; when they do arithmetic, the figures pile themselves into certain forms in front of their memories, suggesting the answer by the relation of one number to another in this mental table. Likewise, geography and history are recalled in the form of maps and pictures. These children should be shown things instead of merely told about them. The most perfect spellers and the great mathematicians seem to belong to this visual-minded class.

Some remember by hearing in their minds the lesson which has been read to them or which they have learned in any other way. The sound of the word is their guide in spelling it; and in the case of English, with its irregular pronunciation, this is not as accurate as the sight image. Arithmetic goes to a sort of tune, in which "seven and five make twelve," "six times six are thirty-six," "eight from twelve leaves four," return like familiar airs. Much repetition aloud helps these children.

Others remember by driving the facts in on their minds by muscular exertion. They know how to spell a word only after they have written it, and when they must spell it aloud after a lapse of some hours their muscles seem to write it out for them invisibly; as they speak, their hands and wrists move as if forming the letters. These children ought to be given a great deal of written work, and should have opportunity to make things which illustrate their studies, like maps, globes, flags, and simple pictures.

To these three classes ought to be added, perhaps, a fourth—which, in reality, is the one to which most of us belong—where all these three types of memory work together. However, it will be found, even so, that one type rules over the others, and is the surest approach to our understanding.

Even in an ungraded school there is no

reason why these three types of children should not be taught each in the manner which helps him to remember best. At first it may appear to complicate the work of the overtaxed teacher, but the results are likely to be so good that she will be saved much going back over the same ground in the effort to bring slow minds up to grade.

After some experimenting she can determine to which type each pupil belongs, and the method of preparing lessons can be suggested to each individually. For instance, one group, the visual-minded, may study their spelling in silence from the book; another group, those depending on sound-memory, may be sent as far out of earshot as possible—into a second room, if the school has one—and read their words aloud together in low voices.

The motor-minded children—those depending on muscular exertion—can copy their words on paper over and over again. The same idea is applicable to other lessons. In the case of geography, for instance, the motor-minded children will need to fix their places in their minds by drawing maps of them, whereas the visual-minded will see imaginary maps in their minds automatically as soon as they read or hear about places, and will not need for the sake of memory the exercise of drawing them, although for manual skill, neatness, and accuracy the exercise remains valuable to them also.

The child who remembers by sound will learn by heart readily, but such tasks as map-drawing are important for him—not for the purpose of preparing him for a good recitation, but in order to preserve him from his great danger, a parrot-like repetition of what he has not understood or thought about. These are the pupils who make the most brilliant records in school, but often amount to nothing in life.

The community is fortunate which has a teacher who is able to instruct her pupils individually, according to their dispositions. When, however, her burdens are too heavy for her to make this effort, a mother may help her children in the work in which they are slow, by the use of games suited to their types of mind and related to their studies. After the games are once learned they will not need her assistance in playing them, although if she can spend ten minutes a day to be their comrade in this occupation it is worth while to do so.

BUILDING A HOUSE AN ARITHMETIC GAME

One child is a builder and is putting up a brick house. He draws the framework and indicates doors and windows. Then, along the base of the house, let him draw small oblongs for bricks. In each brick he puts a number, anything from two to a large numeral, according to the grade he is in. He and the children with whom he is playing build upward by adding bricks in turn, one by one, putting a figure in each one as they lay it in. This figure must be one in which the number at the base of the entire row will go evenly.

In laying the roof, the shingles or tiles may begin with rather a large number, and diminish regularly by some given amount. For instance, the first shingle may be numbered three hundred and sixty-one and the next one four less, making three hundred and fifty-seven, and so on.

The chimney we will make of fractions, and only when enough of these are put together to make a whole, as eight eighths or sixteen sixteenths, can the next brick be marked with a whole number. Thus, if it is to be built of eighths, eight bricks must be laid before the number two appears above the number one. If it is built of sixteenths, sixteen bricks must intervene between each whole number.

This game will help every child's memory. The visual-minded will learn the relation of numbers to one another by the manner in which the bricks and shingles increase and diminish; the youngsters of sound-memory will hear the numbers humming in singsong fashion as they build up the house; the motor-minded will have the satisfaction of drawing the bricks and writing in their numbers.

Some tiny prize for the one who makes the fewest mistakes will add to the children's interest. [CONTINUED ON PAGE 37]

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Three Raps on the Door

[CONTINUED FROM PAGE 15]

this last big Liberty Loan, and he was gettin' sore over it.

"Great grinning gargoyles!" says he, chewin' his cigar savage. "You would think we were asking people to put their money up for tickets to a fake side show. It's not so much the big firms; I can handle them all right. It's the hundred-dollar man who is holding off. And I can't seem to find out what's the matter with him."

"Yes, sir," says I, as soothin' as I knew how.

"Gr-r-r-r!" growls Old Hickory. "Don't 'Yes, sir,' me! That's what I've had from everyone around the place. What I want is to be told why the small investor doesn't invest. Understand?"

"Ye—Er—I get you," says I. "But I don't know the answer."

"Who said you did?" demands Old Hickory. "The question is, can you find out?"

"Eh?" says I, gawpin'.

"That's right!" says he. "Act as if I'd asked you to bring me a slice of the full moon. See here! There ought to be at least a hundred thousand men right in Manhattan who could buy at least one one-hundred-dollar bond—more likely there are two hundred and fifty thousand of them. So they're not scarce. But they are not buying. Why? That's a simple enough problem, isn't it?"

"If you ask it quick," says I.

That gets an eye twinkle out of him.

"It's so simple," he goes on, "that ten of the ablest financiers of this country sat for two hours in this room yesterday discussing how to solve it, and then gave up. So I'm calling on you, young man, for suggestions. Got any?"

"Why," says I, "I expect I might go out and ask some of 'em what's the reason they don't come across."

"That's it!" says he, bangin' his fist on his desk. "Precisely! Now go do it."

And one of the things I've learned since I've been workin' for Old Hickory Ellins is when to quit talkin'. This was when. I nods, salutes snappy, and marches out like I knew where I was goin'. Course, I didn't. You can't go caromin' around New York askin' people things like that offhand and casual.

SO I wanders up Broadway four blocks without catchin' a single party by the buttonhole to ask if he'd bought a bond yet, and if not why not. I ain't sayin' I didn't have the nerve: I simply knew it wouldn't work. And, just to find a good place for thinkin' a few chunks of thought, I steps into one of these side-street shine joints and climbs into a chair.

"Tony," says I to the bullet-headed Greek that's manipulin' the brushes, "where's your Liberty bond button?"

Tony he grins amiable and shrugs his shoulders. It comes out he don't know what I'm talkin' about. Liberty bonds? No, he ain't heard of 'em.

"Well, what do you soak all your spare cash into?" I goes on.

"Oh! Cash!" says he, his black eyes lightin' up. "I tell you. Keet-chee-gammi. Yess. Dat's him."

"What is it?" says I. "A Juarez mud skate?"

"No, no," says Tony, shakin' his head vigorous. "No racin' horses. I all tam get stung on him. Dis is well for oil—way off—Meen-a-soda. I buy him ten cents a share now. Next mont' he get twent'-fi—mebby fit' cent."

"Huh!" says I. "Oil stock, eh? Wild-cat stuff. Good thing, is it?"

"Sure!" says Tony. "Fine! I got lot. You want some, hey?"

"No, Tony," says I. "When I get to hatin' my money as bad as that, I'll have it changed into half-dollars and go feed it down a sewer gratin'. Then I'll know where it is."

"You wait!" says Tony. "Nex' mont' I'm r-r-eech mans."

Well, that interview didn't help much. Only it was givin' me a little practice in tacklin' folks. I pulled something like it on the cigar-counter man farther up-town while I was loadin' up with chewin' gum. No, he hadn't plunged on any of the 4¼'s yet.

"They're all right for these big-money guys," says he, "but for me—well, when I part with a bunch of tens I want something good for it. See?"

"Ye-e-es?" says I, encouragin'. "Such as—"

And inside of three minutes I've been

told confidential of a new airplane comp'ny whose paper can be bought for twenty-two now but will be sellin' at par before fall. Also he has offered to let me in on it.

Once more I decline to have dividends wished on me. I hate to admit it, too; but even then I don't get the connection. There are times when most of my thinkin' seems to take place below the ears.

So it was mainly to kill another half-hour before lunch that I dropped into my favorite tonsorial basement and waits until the boss barber can give me a hair trim. I'd never talked money matters with Gus before—mostly baseball and about the swell parties he'd been on since I was in last.

But this time I opens the new line. And say, he hasn't got halfway round my pink thatch before he's confided to me that Convento Rubber is what's goin' to bring him in that double tenement up in the Bronx and a second-hand Hunk-o'-Tin roadster that's most as good as new.

"I got it straight," says Gus, "from a brother-in-law of one of the vice presidents what this Convento process does. It's scientific. Honest, they take old clothes wringers, worn-out casin's, suspenders even—anything like that,—dump it into the machine, and out comes the pure Para stuff, like what's worth 'most a dollar a pound these days. Think of that! And I'm buyin' these shares at sixteen! Why, when the comp'ny gets runnin' good the stock'll go sky-rocketin'; and me, I'll be cashin' in coupons like a regular gent. If you want to get in on some, I can fix it."

I didn't. But, not wantin' to hurt Gus's feelin's, I told him I'd think it over. And for the next hour I almost did do some thinkin'. How long had this been goin' on, anyway? Was every little tin-horn sport up and down Broadway plugin' on Zoo certificates that way?

WELL, when big Joe, the head waiter at the Buckingham Grill, yields to the pressure bump and begins givin' me details about Radio Construction, which was goin' to turn out an engine that would make the Liberty motor look like a mechanical bug, I quit actin' like I was troubled with bone in the head and came out of my trance. All in a flash I saw where this was what I'd come out to dig up.

I let Joe spiel along to the point where he offers to open the basement door for me.

"At twenty-six, eh?" says I. "Joe, that listens good. Just happens, too, that I've got a little wad I might place if I knew I was gettin' in right. Course your say-so is good as far as it goes, but—"

"Listen," says he. "I could name you twenty more—solid, substantial business men like you, who come here—that have all gone into Radio."

"How do you know they have?" I asks. Joe glances around cautious, waits until a bus boy has filled my water glass, and then whispers huskily: "Because I placed the goods."

"That's enough, then," says I. "How many shares can you deliver to-day—now?"

"Five hundred," says Joe.

"Suppose I wanted more—a thousand?" says I.

"To-morrow noon," says Joe.

"But the market might buck by then," says I. "Couldn't you send me to headquarters?"

Joe shakes his head.

"Ah, you'll get your commission just the same," says I. "All you got to do is gimme an order."

He's a foxy old fish-and-soup, Joe. He eyes me shrewd for a minute. But I must have been lookin' stupider and more innocent than usual. Anyway, he falls for it. And half an hour later I'm down in the Anaconda Builidin', huntin' around on the nineteenth floor for the offices of the Star-Spangled Investment Company.

I found 'em all right; but before I crash-es in I decides to do a little loafin' around the corridor. And while I'm driftin' up and down, lettin' on to be puzzlin' over some notes I've made, but keepin' the Investment Company's main entrance in sight, I bumps up against this name on the adjoinin' suite. It's a mighty familiar name to me just then, too.

"Huh!" says I, indicatin' 'most anything you like, and pikes straight for the front office of the Star-Spangled people.

Well, I've been office boy and private sec too long not to know how to get past a gate or through a ground-glass door. All you

[CONTINUED ON PAGE 54]



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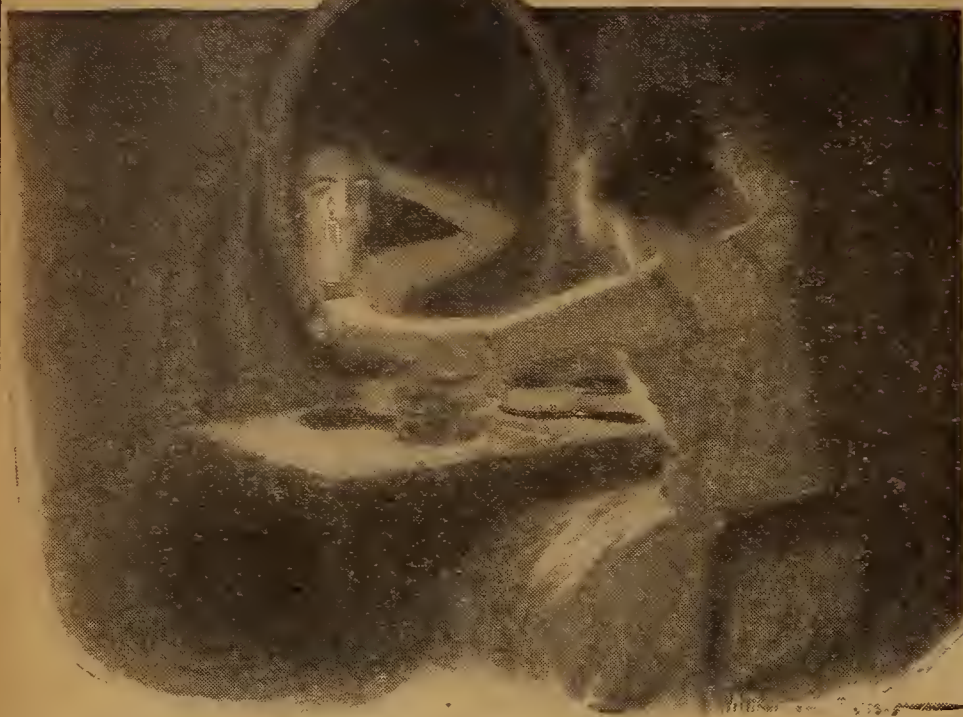
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Why Tenant Farming is Bad Business

[CONTINUED FROM PAGE 12]

all his white chickens in a coop on his wagon.

I was sitting on my front porch, smoking an after-breakfast pipe.

"Where are you going with your poultry, Hank?" I called to him.

"I've sold the whole lot," says Hank, stopping his team at my gate, "for five dollars apiece, cash on delivery."

That sounded interesting, and I got up and walked across my front yard—knee-deep in weeds it was, pretty near, for more particulars. Hank supplied them without urging.

He'd sold his prize chickens, he told me, to a fellow who'd started a "model farm" near the main railroad in the next county. I'd been hearing about this farm, more or less, for nearly two years, or ever since it had been started, and I was more than a little curious to see it. So when Hank asked me to go along with him I immediately accepted the invitation.

That farm was a revelation to me. If I hadn't seen it with my own eyes I couldn't have believed that there was such a farm.

I scarcely know how to describe it. My first thought was, I remember, that it was the direct opposite to my farm in every possible way.

My next feeling was one of amazement at the cleanliness, the neatness, the inviting aspect everywhere you turned. The house, barn, and all outbuildings were freshly painted white, and shone dazzlingly in the July sun. The fences were made of the latest stock wire, strong on durable posts. There were trap nests in the concrete hen houses, running water for all the stock, and spray pumps for the orchards.

It being Sunday, the owner—a ruddy-faced, heavy-set man, who'd written several books on agriculture, as I afterward learned—was delighted to show us around; and, so far as I could see, there wasn't an object on his farm that was out of order and not one that was out of its proper place. Everything was right up-to-date, and he'd reduced his farming to a system that ran as smoothly as a piece of well-oiled machinery.

But probably the thing that impressed me most was his stand of corn and oats. I couldn't help noticing that both were far superior to mine, and yet both of us were tilling the same soil. I noticed, too, that there was no wasted ground in his fields. In fact, every square inch of his farm seemed to be utilized for a definite purpose. It was the only farm I'd ever seen where no odds and ends of ground went to waste.

I SPENT, maybe, two or three hours on the place that day, and when Hank and I started home I was in a pretty thoughtful mood. And when I saw my broken fences, the weather-beaten house with the paint peeling off in the hot summer sun, the rickety old barn, and the general evidence of inefficiency and neglect, I felt suddenly sick and disgusted.

I was so quiet and thoughtful the rest of that day that my wife asked me if I were ill. Ill? I never was more ill in my life, though of course I didn't tell her that. I was ill with the thought of what I might have done with my farm if only I had followed my good intentions.

I worried about it all that afternoon, and I was still gloomily morose when I went to bed that night. At last I consoled myself with the thought that a farm such as I'd seen that morning couldn't be more profitable than mine.

"The general upkeep," I told myself, "would eat up all the profits. A farm like that is nothing more than a rich man's plaything."

However, I found next morning I still wasn't quite convinced about it, and the following night, just to make sure, I went back to that model farm and had a long talk with its owner.

He convinced me that I was wrong about the profits. He also proved, by means of the books he kept, that he was drawing, pro rata, a much bigger dividend on his investment than I was drawing on mine.

He ran his farm strictly as a business proposition; and he argued that any farmer, to obtain the maximum result from his soil, must use his brains in the business of farming more than his muscles.

"Have a system," he said, "that will eliminate every ounce of wasted energy—and stick to that system. Don't use slipshod methods, for anything and don't let your premises become untidy. A slovenly farm, like a slovenly office, spells failure—or, at best, a mediocre success."

He said a lot more along the same line, and every word he uttered riveted a determination which had been growing in the back of my head since the day before. That determination was to revolutionize my farming methods and become something more than a hand-to-mouth grubber.

"If he can do this," I declared to myself, "so can I."

I was particularly interested in what he had said regarding the state college of agriculture. Up till then I, like most other farmers I knew, had regarded the state college as a kind of joke—a breeding spot for beautiful theories that all went to pieces in a practical test.

I realized now how mistaken I was. I knew now that the state college had taught him how to get a better yield of corn and oats than I could get from the same soil. And that was only one of the things he'd learned in the agricultural school.

I felt I was too old myself to start going to college, but I made up my mind my son should go—and he did go. He'd begun to show a decided liking for agriculture, and he jumped at the chance.

Meanwhile I lost no time in putting my other plans into operation. I started at once to change my system of running a farm. First, I discarded all my worn-out implements, and invested every cent of my savings in modern, time-saving machinery; and I never made a more profitable investment.

Then I drew up a plan for making a stated amount of repairs each month until my fences, sheds, tools, barn—everything on the farm, in fact—were in first-class shape. I decided to eliminate all the unsightly makeshifts with which my farm abounded, and replace them with permanent things.

ALL this, of course, meant work and time; but once I got started, I took a genuine delight in doing it, and I had the satisfaction of knowing that every week carried me just that much further toward my goal.

Upward of eleven years have passed since then, and although I haven't yet quite attained that ideal I am immeasurably nearer to it. I've gradually weeded out all my old scrub stock until now I own nothing but purebreds. I will do without a thing nowadays rather than use a makeshift, and I pride myself on the fact that there's not a broken fence on my estate, and not a thing that's in need of repair.

Year before last I bought at a bargain a 50-acre strip of ground adjoining my property. It was nothing more than a deep-matted jungle, a wilderness of trees and underbrush; but I cleared the timber, sold the wood at a record-breaking price, and turned a flock of sheep loose in the field. My profit, so far, from that deal amounts to well above \$2,000.

I keep a set of books now, and I run my farm the same as a business man runs his business. Every nickel is accounted for, and I can tell by glancing at my books just how I stand.

Of course I don't attribute all my success to my progressive farming methods, but it certainly has been due to it indirectly. Moreover, I now own a farm that any man might well be proud of, and it has almost doubled in value in the last twelve years.

There is no wiser saying than, "Nothing succeeds like success." The fact that I'm known as a highly successful farmer spurs me on to be still more successful. Knowing that my farm is considered one of the most successful in this part of the country, I am always trying to make it more and more successful.

Next year I intend building a new house of brick and stone, and I am also contemplating a fireproof barn.

My son came home from college fairly brimming over with things he'd learned there, and we immediately began applying his knowledge to our ground, with tremendously profitable results.

My son's training in agriculture and our combined industry have built up one of the best-paying farms in America. It has sent his sisters to college, it has bought many little comforts and luxuries for his mother, and it has brought peace and happiness for all of us.

So if anyone should ask me for my advice to a young man just starting out, or an older just starting over, it would be: Don't rent the farm you work, but buy it. And don't neglect the farm you buy—groom it.

A Plea for the Old-Fashioned Garden

[CONTINUED FROM PAGE 30]

It should be remembered that success with phlox is dependent upon keeping their roots well moistened. These are always close to the surface, so that a protracted drought, or even a day or so of dry, hot weather, is apt to damage, if not entirely ruin, them. A mulch of some kind is always desirable.

I remember with a disinct flush of pleasure an accidental clash of color in my own garden that happened years ago. I had a long line of purple iris against a tall privet hedge, and in front of it I planted what I supposed to be white tulips.

To my dismay I discovered that I had put in scarlet Darwins instead. I awaited for spring developments anxiously, but to my astonishment the result was as striking from a decorative standpoint as could be imagined. Iris and tulips blossomed together, and from a distance, with the sun shining upon them, they looked like chalices of ruby and lapis lazuli lifted against a curtain of emerald-green.

The theory of broken color, beloved of modern artists, can be successfully applied in a garden by planting in small clusters to produce variations of a single tone or with contrasts in view.

A splendid example of this method came to my attention last summer. A large bed, about 40 feet long by 15 feet wide, had been devoted to miscellaneous annuals. The scheme was devised around a cluster of shubbery as a central motif, and the plants were put in according to a carefully considered and well-balanced plan.

There were clumps of scabiosas, mauve, white, and garnet, groups of red and white snapdragons of the tall varieties, orange marigolds, giant saffron and white zinnias, and here and there arose splendid specimen dahlias.

At each corner there were big crescent indentations of the variety of the *Celosia plumosa* known as the wool flower, and about the whole bed was an uneven border of sweet alyssum and dianthus.

When I saw it, all of the plants were blooming at once—a perfect blaze of color that had the semblance of strikingly bizarre but fascinating mosaic.

A landscape gardener could never have achieved such a result, for the reason that no landscape gardener who cared a hang for theory, or for that more precious thing, the sanctity of his reputation, would think

for a moment of "jumbling up" color in any such an unintelligent way.

It's one thing to seek seclusion with a dictionary of rhymes and a book of prosody; it's quite another to write a song that, while it may be wholly at odds with traditions, reaches the heart. So it is with landscape gardening—and just gardening.

No matter how much or how little ground you may have at your disposal, if you are fortunate enough to possess inherent good taste, if you are willing to devote yourself to the task heart and soul, and, further, if you determine to express your own thought and not somebody else's individuality, you can have a beautiful flower garden.

The one consideration above all others is a deep and abiding love of flowers. Without this there is no more chance of being successful in the effort to make the desert places bloom than there is for the person who does not love music to compose symphonies or to become a great virtuoso.

Tips on Growing Asparagus

By M. N. Harrison

ASPARAGUS will grow in almost any soil rich enough to meet the feeding habits of the plants. The most desirable varieties are Palmetto, Columbian, and Conover's Colossal.

The ground for planting may be prepared either in the spring or fall. In preparing in the fall, well-rotted manure should be plowed under.

Asparagus can be grown from seeds or from one- or two-year-old roots. The seeds should be planted thick in the rows in a nursery bed, and when the plants have grown to the desired age the roots transplanted to the permanent field.

The distance between the rows varies according to the purpose for which the asparagus is planted. If grown for home use the plants should be set 14 to 18 inches apart in the rows and three feet apart between the rows. The roots may either be set in a deep furrow, which should be gradually filled as the plants grow, or planted 6 to 8 inches deep. Where plenty of manure can be applied a trench should be filled with manure, covered with soil, and the roots planted over this.

What Farm Women Vote For

[CONTINUED FROM PAGE 22]

conditions and remedy them, and our governor devoted a good part of his inaugural address to this housing problem. I anticipate more opposition on this score than from any other, except the saloon; but it will come in due time. Why should we make the world a good place to live in, over in Europe, and let it stay a poor place to live in in hundreds of American towns?

From a purely rural and agricultural standpoint, here are some of the things farm women have voted for and secured since we got the right of suffrage:

To compel railways to furnish cars to all shippers alike. Of course, this applies to conditions before the Government took over the railroads and the war industries board decided priorities.

To compel railways to furnish sites for elevators and warehouses on their right of way.

Establishing a weighing and grading law which saved hundreds of thousands of dollars each year for the farmers. This, too, was before the Government took a hand in the grading of grains and the fixing of prices.

To prohibit discrimination between localities in the price of cream.

A law taxing a 60-horsepower automobile \$26 and a 20-horsepower car \$6 a year. The big cars tear up the roads, and we insisted that they pay for their destruction. And all the automobile license money is spent on the roads, too.

Provided for and established a model highway commission which cheapens and standardizes road construction and secures federal aid.

A law for the standardization of rural schools, a long step toward making schools of real practical service.

Established township dipping tanks for stock.

Established county agricultural and training schools.

This is only a partial list, you understand, but it shows the nature of the things we have fought for and are continuing to fight for. Farm men have had the right of suffrage as long as city men, but they never were united in demanding their rights—or, at least, they never got them—until the farm woman was accorded a vote. I think we have the eyes of our husbands and brothers and fathers pretty well opened to the fact that the farmer can get what he wants if he only goes after it determinedly and unitedly. Suffrage has proved that much, not only in this State, but in all the States which enjoy it.

Summing it all up, I am not going to say that we have brought the millennium to pass since we were given the vote, but I am convinced that we are making things better in a score of ways. We have made the bartenders go to useful work; we have made our roads so they are passable 365 days in the year; we have saved hundreds of silly farm girls who would otherwise have gone wrong; we have improved conditions for children and women workers generally; we have made farming more satisfying and more profitable. And we've only had the ballot right for ten years, and a lot of us didn't even know what to do with it for a year or two. I guess that's a pretty good record for a class of citizens which some folks were unkind enough to say, a few years ago, didn't want the suffrage right, wouldn't exercise it if they did have it, weren't intelligent enough to know how to vote, and, anyhow, would vote just as their husbands did. I don't allow my boy to use slang, but he used a phrase the other day that hits it off admirably when he said somebody "had another think coming."



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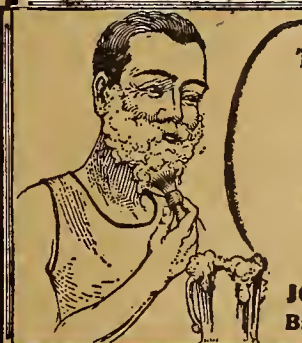
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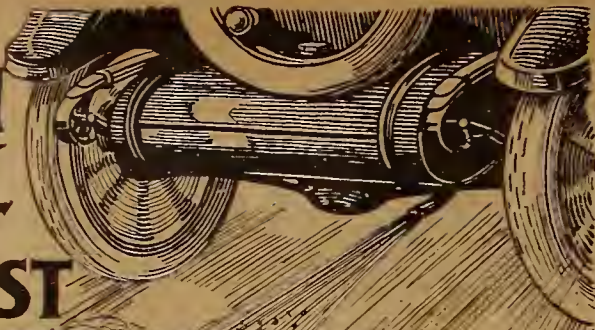
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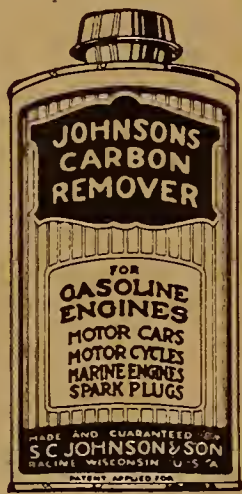
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A Pussy-Cat Party

By Emily Rose Burt

WHEN Billy's mother decided to give him a birthday party she pounced upon the pussy-cat plan, partly because pussy willows are still flourishing in April, but mostly because kittens are favorites with nine- and ten-year-olds.

The invitations were folded "kitty-cornered," and inside of each appeared a fat, fuzzy little gray puss taken from a real pussy-willow branch. "Puss" had pend-ink ears, whiskers, and tail, and sat upon a tiny red-painted fence post.

Guess who'll bid you welcome gay
On Billy Bryant's ninth birthday,
Next Saturday at half-past three.
(Be sure to come and then you'll see.)
Pussy will, oh!

The first game was a good romp at "Puss in the Corner." That was followed by the foolish but funny old game of "Poor Pussy."

While the children were still in a circle for that, Billy's mother explained a new game. It was called "Kitty Kitty," and was played on the lines of "Spin the Platter." In every child's ear Billy whispered the name of some sort of cat; as, for instance, tiger, "yaller," green-eyes, double-toes, Maltese, Angora, black and white, gray.

He then occupied the center of the circle and spun a tin pie plate. As he did so he called out one of the names that he had assigned, and counted rapidly out loud up to ten. Thus: "Green-eyes, one, two, three, four, five, six, seven, eight, nine, ten." The child who had been given the name "Green-eyes" was supposed to jump up and snatch the pie tin before Billy finished counting ten. If "Green-eyes" failed, then he had to take Billy's place. Billy too, of course, had a pussy-cat name.

Another circle game that was fun was called "Pussy's Prowling." It was on the order of stage coach. Billy's mother told the story of a kitty's adventures, and before she started to tell it she whispered to every child the name of some object which was to have a place in the story. For instance she gave out "haymow," "milk saucer," "mouse hole."

Every time that she mentioned any such name in the progress of the story the child who had it was expected to rise from his chair, turn around three times, and sit down again. When the words "pussy's prowling" were mentioned, all the players jumped up and exchanged seats. The story teller also tried to get a seat and, if she succeeded, the child who was finally left without one had to continue the story.

The next game was called "Hunt the Mouse." Billy had hidden a chocolate mouse somewhere in the room, and the children were asked to be kittens and try to find it. Whenever anyone came very near the hiding place, Billy meowed loudly, or if everyone was very far from it Billy would only mew faintly. The "kitten" who discovered the mouse was allowed to keep it for a reward.

In another room the children had a chance to hunt for those mittens which the "naughty kittens" once lost. Many tiny red paper mittens were scattered throughout the rooms, where they could be much more easily found than the chocolate mouse.

The supper table delighted the children. In the center of it sat a big stuffed cat surrounded by chocolate mice, and at each child's place was a tiny plush cat with the child's name on a tag tied to the neck bow. Such toys can usually be bought in five-and-ten-cent stores.

Pussy-willow sprays laid flat on the cloth decorated the table gracefully. The napkins were the paper ones that feature black cats at Hallowe'en.

Little ramekins of creamed chicken

pleased the children quite as much as if they had been pussy-cats. With the chicken Billy's mother served "kitty-cornered" sandwiches of brown bread filled with cream cheese and chopped nuts. There was hot cocoa too, and for dessert individual molds of chocolate blanc-mange with whipped cream and a candied cherry on top. Needless to say, there was a birthday cake which was brought in ablaze with red candles and set before Billy to serve.

Each guest received a souvenir chocolate mouse, and was quick to declare upon departure that the pussy-cat party had been, oh, so jolly!

NOTE: The story of "Pussy's Prowling," which Billy's mother told, will be sent on receipt of a stamped self-addressed envelope. Write to Entertainment Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York City.

Step-Saving Hints

By Jane McPherson

FOR years I worked in a large kitchen—in a kitchen which was even larger than our dining-room. It was used for almost everything—as a meeting place for the men who were waiting for their meals, as well as for a laundry.

When we had saved up enough to fix over our house, I determined that I would have the kitchen the way I wanted it. It would be my workshop and not a place to do general chores. I decided to adopt the efficiency measures used in business. If time and energy could be saved by routing work in an orderly and systematic manner in factories, why not in my kitchen? My new kitchen should be arranged so that steps would not have to be retraced.

So now my husband has an office where the men wait for meals, and the laundry work is done in a separate room provided for that purpose. Both the men and I find this arrangement much more pleasant.

I use my kitchen now almost exclusively for the work for which it was intended—the preparing and clearing away of meals. In the arrangement I followed a plan recommended by a domestic science specialist whom I know, and I have found it a great time and step saver.

In preparing a meal the raw food and utensils are placed to the left of the stove. The serving table used for assembling the dishes for the dining-room is to the right of the stove. The soiled dishes are brought from the dining-room to the right side of the sink, where they are washed. They are drained on the left side of the sink. The cupboard for the china is near the dining-room, and the cooking utensils are placed close to the stove.

This same specialist told me the following important points about kitchens in general, and as I followed most of the suggestions in building my own kitchen I can vouch for their worth:

Daisy Chain Yoke



COMPLETE directions for this attractive yoke will be sent on the receipt of four cents in stamps by the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio. With the directions is a large picture which shows the pattern clearly. Order No. FC-114.

Kitchens are built smaller now than formerly. In the ideal kitchen the cupboards are built in the walls. Kitchen equipment can be placed to the best advantage in an oblong kitchen with windows on two sides. The woodwork should be plain and flat, without panels. In choosing the color for the walls the housewife should be guided by the position of the room. A north room needs a warmer tint than a south room. The best floor covering is hard wood or linoleum, which should be varnished once a year, and oftener if there is much wear. Electricity is the ideal fuel, but if this is not available, and wood or coal must be used, provision should be made to use kerosene or gasoline in the summer. The use of a fireless cooker saves fuel.

Don't Tamper with Birthmarks

By J. B. Huber

OLD wives' tales" sometimes have a lot of real wisdom in them. For instance, there is grandmother's advice about not disturbing birthmarks. Science now knows why that advice is good—why moles and the like, which do not feel sore or tender, and are reposing peacefully in the skin of the face or the neck, should be left carefully alone.

The fact is that there is danger of cancer in unskillful attempts to remove such natural growths. We must understand that most cancers are the result of a "pre-cancerous condition," plus the factor of local irritation—for example, the rubbing of badly fitting eyeglasses or one of those boned collars. Such irritation may be either severe and acute, all at one time, or constant and chronic, enduring through years. And I am here warning especially against cancers that may result from injudicious operations and by inexpert persons who are likely to be ignorant of the danger. Such manipulations may have the effect of irritating the tissues in and under the skin and thus incite those parts to cancer development.

The novice may remove most but not all of a birthmark. He may take away as much of the growth as was visible to the naked eye, but leaves a microscopic remainder which becomes a source of irritation predisposing to cancer.

Hair moles are the most dangerous to irritate or to operate on, either by the use of the electric needle, carbon-dioxide snow, or the X-Ray. The electric needle would leave an unsightly scar; the "snow" an area of parchment skin, and exposure to the X-ray has, in unskillful hands, been the forerunner of many a cancer.

Of course, any sore that will not heal within reasonable time after the application of the usual remedies, or any wart or mole that suddenly begins to grow rapidly, or any growth that shows swelling, inflammation, and redness, and is painful, must be attended to—but only by responsible doctors.

What Sort of Mind Has Your Child?

[CONTINUED FROM PAGE 32]

It will help very little children who are having difficulty with sounds in reading to try to think of all the objects they can which begin or end with a certain letter or a certain combination of letters. Let one child be "It" and ask the others in turn, one for five words beginning with *th*, another for five ending in *ing* or *tion*. They must answer within a given time, say while "It" counts sixty. Those who fail, after the game is over must perform any odd trick which "It" demands of them, such as hopping across the room with legs tied together, or turning a somersault.

The same game may be played as an exercise in grammar by designating the part of speech which shall begin or end with the chosen sound.

WHAT AM I? A GEOGRAPHY GAME

Each child takes the part of some feature of the country which he is studying: it may be a river, a mountain, a mine, a forest, a desert, or the cornfield next door.

The River, without telling what he is, must describe his birth from springs, his deepening, widening waters, the changes in his shores and the crops which grow along them; his falls which give power to factories and cause the growth of a city.

The Mountain must describe the varying vegetation upon its slopes, the changes at the timber line and at the snow line, the birds, the beasts. The Mine may describe the building of the shaft, the character of the ore and its uses, the lives of the miners. The Cornfield may tell what clover or alfalfa did for its fertility, and how the farmer tested the seed corn, and what its yield was.

After each story is finished the children guess what the object is which has been described. The child giving the most complete and most truthful account of the object which he has impersonated receives some toy, such as a top, which he keeps until he loses it to someone who beats him in a future contest. The child who keeps the trophy at three contests becomes its owner.

Mrs. Winifred Sackville Stoner in her

book, "Natural Education," has built up a whole system of education through games. She recommends ball-tossing between two people as an assistance in learning poetry by heart. One throws, saying, for instance: "My Country, 'tis of thee;" and the other, returning the ball, continues, "Sweet Land of liberty." In this exercise it is important to keep the ball going steadily. If it drops and is scrambled for, the pause interferes with the memory lesson, which depends on the unbroken rhythm of the throw and the throw-back corresponding with the lines.

For a motor-minded child this is particularly helpful.

NOTE: Mrs. Keyes will be glad to help parents of children who are interested in these games. If they write her in the care of FARM AND FIRESIDE about the special difficulties which they wish to overcome by means of them, and enclose a stamped self-addressed envelope, she will suggest games suited to the children.

Why Not Be a Washer-woman?

By Jane Gates

NOT long ago I was left alone with three children to bring up and nothing to do it with. When I sat down and made an inventory of my accomplishments, preparatory to earning a living for myself and them, I found that the profession for which I seemed best suited was that of a washer-woman.

My friends were shocked and disgusted. It seemed dreadful to them. The fact that I actually liked to wash and iron pretty things, and would almost rather have died than have gone into a man's office or behind a counter, meant nothing to them. "Never you mind," I told them, "I'll be a washerwoman de luxe, and the woman who doesn't send her fine things to this Madam Sans Gène will be so behind the times that she will be as uncomfortable as she would in a last year's hat."

I went to a society editor of one of the Sunday papers in town, and got a list of the ultra-fashionables. I sent a letter to each of them, explaining my new venture, although, of course, I didn't tell them that it was a new one, and stated my prices, which were so high that they created interest in themselves.

"I am not soliciting ordinary stuff," I said, "that an ordinary laundress can do; I can't bother with that. But when your white satin skirt is ready for a bath, or your pet silk sweater, or your silk underwear and stockings, send them to me. I can do them so you will never have to worry about them again."

The responses I received from the letters surprised me. I do every piece myself, and to-day my income is more than it was when my husband was alive. A girl in the kitchen does my housework. We live very comfortably, and I am already accumulating a bank account toward a college education for my children.

What to Do with Cheese

CHEESE SALAD IN GELATIN—Whites of two eggs well beaten, one cup cheese, two tablespoons granulated gelatin, one and one-half cups water. Add to the whites of eggs, beaten until stiff, the cheese and gelatin dissolved in hot water and cooled. Pour into individual molds, and when set serve with mayonnaise dressing.

CHEESE PATTIES—Scald one cup milk, add one-half cup grated cheese, one beaten egg, and a little salt and pepper. Put over fire, and stir until the mixture is smooth and thick. Remove from fire, and add one tablespoon butter. Moisten slices of bread in milk, cover with the prepared cheese, and bake in a quick oven for ten minutes.

CHEESE FINGERS—Beat to a stiff froth two egg whites and fold in lightly a scant cup grated cheese. Season to taste, with salt and a dash of red pepper. Spread lightly on long narrow crackers, and brown in the oven. These are very dainty served hot or cold.

CHEESE RELISH—Take one package of cream cheese, mash it with a fork, and mix with whipped cream, making it to the consistency to be rolled in balls. Make into rounds, then roll these balls into finely chopped nuts. Serve with salad.

Bitter or Better Baking

A letter makes a great difference in a word. A word makes a great difference in baking powders.

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Brightening Up the Old Car

By A. H. Pulver

THE old saying about the rejuvenating effect of putty and paint used wisely rings true in regard to the old automobile. The average automobile owner can do a first-class painting job, even though he be a novice with the brush, if he has a fair amount of patience, a good workroom, and gives careful application to the work. He can produce just as good a body finish as the expert.

The paint on a car is composed of three principal parts: First, the priming or foundation; second, the color; third, one covering of protective coating. The foundation merely gives a smooth base for the application of the succeeding coats. The color is composed of a number of thin coats rubbed smooth, and gives the body of the job.

The protective coat is a thin, hard coat of transparent varnish, which protects the softer coloring material from the inroads of the weather. If the protective coat is kept intact, the color coats will maintain their original brilliancy.

The amateur who does his own work will not have to start fresh, because a large part of the work is already done for him. It is only when the paint on the car is badly damaged that the foundation or priming coat has to be done over.

When this is the case the entire surface should be gone over and rubbed smooth by means of fine sandpaper. Before the sandpapering is done all grease should be washed off with a good scouring soap, followed by a thorough washing in cold water.

All breaks in the surface of the former paint should be coated with paint, and then filled with putty, allowing this to dry for a full day before touching it again.

All the retouched spots, and in fact the whole body, should be gone over again to



An underground fuel tank lessens the danger of explosion

see that the surface is level. Fine sandpaper can be used for this, and, to be absolutely safe, the body should be again washed with cold water to remove all trace of dust and dirt.

The color coats should be mixed very thin. The thinner the coats and the greater the number, the better the job will be. Each coat must dry thoroughly, and then be gone over with pumice, rubbing down all the rough spots. The pumice comes in powdered form, and can be obtained at any paint store. After the last color coat is applied it should be allowed to dry extra well. The coats number three or more, depending on how well you want to do the job.

A coat of color varnish, explained later, is laid over the color coats of paint and allowed to dry, after which this is rubbed down to absolute smoothness and any striping desired is applied.

The striping should be covered with a couple of coats of rubbing varnish, and rubbed down when dry with the pumice and water paste, after which two coats of finish varnish are carefully and smoothly laid on. The body is now finished. Be sure that all this work is done in a dust-proof room.

Preparing the chassis is a matter of getting rid of all grease. Unless this is all off the painting job will be useless, as the paint will only adhere in the clean spots, and a bad job will result. First scour with warm water and grease-cutting soap. Then go over it again with turpentine, and finally with a strong solution of washing soda, finishing with a good rinsing with



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For the Motorcycle Fan

By William E. Curley

THE new motorcycle rider dreads his first puncture. Perhaps a few simple instructions from an old motorcycle rider would help him:

Find the puncture first. This is comparatively easy. A tack or nail usually betrays the position of the leak. Do not pull it out until you have marked its position on the tire.

Remove only a small portion of the casing from the rim—just enough to allow the punctured portion of the tube to be pulled out ready to patch.

It is a mistaken idea to suppose that a perfectly air-tight permanent repair can be obtained only by vulcanizing. I never vulcanized a tube in my seven years of constant motorcycle riding, and by the time I discard a tube it is a mass of patches.

I always carry a supply of regular prepared patches. It is poor economy to cut up an old tube for patches. A prepared patch is of heavy rubber with feather edges. When it is applied these thin edges stick to the tube very tightly, while a patch made from a piece of old tube, being of the same thickness throughout, will almost invariably curl up around the edge.

Scrub with gasoline the portion of tube around puncture—as well as inside of patch—until all trace of soapstone has disappeared and the rubber is absolutely clean. Use a clean rag or handkerchief for this. Rinse off with gasoline, allowing this rinsing gasoline to evaporate. Apply a thin coating of rubber cement to tube and patch, rubbing with finger until it is spread uniformly. (It is most important that the cement be spread thinly and evenly, as otherwise the thin cement will dry properly while the thick spot will not.) Let cement dry until your finger will not stick to it. Apply a second coat, and let dry exactly like the first.

Apply the patch, being very careful in placing it in the proper position.

Press the patch firmly to the tube for a few minutes, being sure the edges adhere.

Rub a little soapstone over patch and portion of tube with cement on it to prevent the tube from sticking to casing.

Replace tube and casing and pump up. The pressure of the tube against the casing makes the patch almost a part of the tube.

Remember to scrub tube and patch clean, and to let the cement dry sufficiently before applying the patch. A patch applied before the cement is dry will not stick.

cold water. It is really better to lift the body off for this work.

When this is done, proceed with painting exactly as with the body, except you can get along with two thicker color coats instead of a large number of thin ones. Be sure to prepare the chassis with a smooth foundation before applying the color coats.

The color varnish which is applied to the surface before the finishing coat is simply a mixture of the particular color with varnish. The mixture generally used is about one-fourth pound of color to two pounds of varnish.

If a more thorough job is necessary because of the bad condition of the original, it will be necessary to scrape off the paint; or, if the color that the car is to be painted is different from the old color, it will be necessary to take off the old paint.

The best way for the amateur to do this is to buy a good paint remover, and then follow the directions given with it. If he attempts to burn off the old paint with a gasoline torch he stands a very good chance of destroying the entire body.

Unless you are an expert in the use of the torch, do not try it. You will have to scrape in addition to using the paint-removing chemical. After the paint is scraped off, before the first coat is given, it will be necessary to bring everything to a fine finish with sandpaper.

When the surface is thus prepared you are ready to give it a priming coat of metal primer. This can be bought in any paint shop, and is applied evenly over the whole surface. This is allowed to dry at least two days before it is sandpapered smooth.

A coat of rough-stuff filler is applied over the primer by mixing two pounds of keg oil-ground lead with a half mixture of coach japan and rubbing varnish. These are mixed to a stiff paste and applied evenly.

Four coats of this should be applied, with at least a day between each. After allowing this to dry a week, rub it down to a smooth surface with a pumice cake and water.



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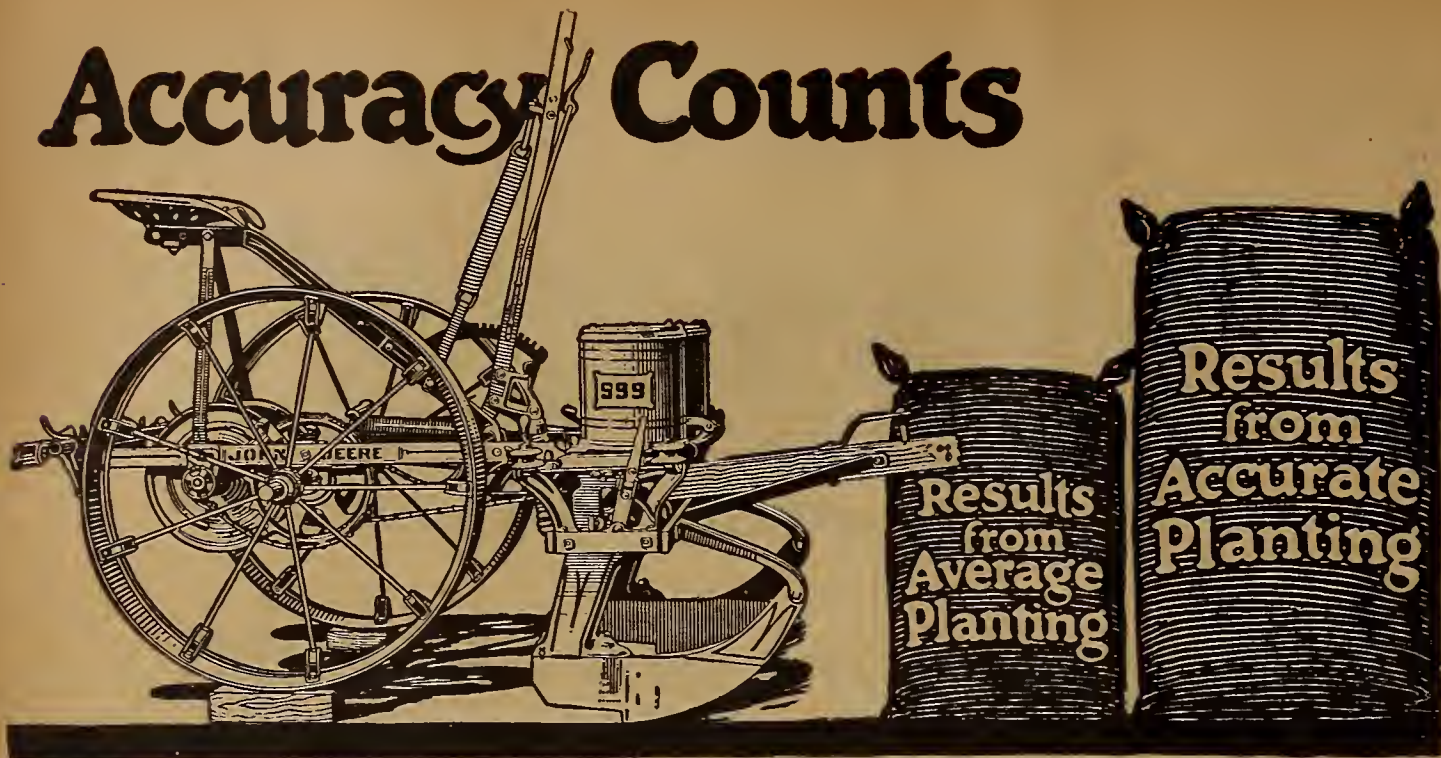
The Gigantic New Guinea Bean is the latest Vegetable Wonder, introduced by us for the first time in 1917. It is grown principally in New Guinea or Papua, as the country is now called, an Island situated to the North of Australia. It is

said to be a branch of the Gourd family and to furnish subsistence for the Papuan natives. The vines are easily grown, very prolific, and a valuable adjunct to farm or garden. The beans themselves grow to an astonishing size, one bean measuring from 3 to 6 feet long, and weighing anywhere from 10 to 16 lbs. and even more. One bean is sufficient for a family for several meals. When cooked they make delicious eating. In addition to their palatableness, the beans are very rich in nutritive materials and the delicate buttery flavor is much appreciated. Being so easily grown, and bearing so prolifically, they should help to cut down the high cost of living to quite an appreciable extent. Try them. You will find them the finest vegetable you have ever tasted. Sample package of seeds, with full directions for cultivating, cooking, etc., 25c.

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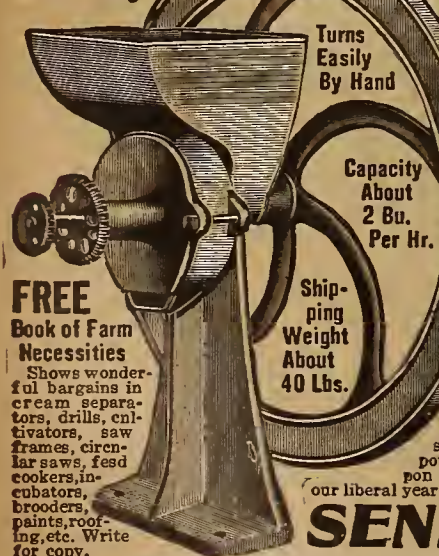
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How I Make My Hogs, Cattle, and Sheep Pay Me Big Money

[CONTINUED FROM PAGE 9]

the high cost of commercial protein feeds I attempt to raise as much of this as is possible on my farm. In this respect I have found alfalfa and soy beans profitable. My crop of soy beans in the corn this year was phenomenal, and I hogged off 90 acres of corn and beans, besides cleaning up 90-acres of silage corn, sowing the ground to wheat.

From the grass in the summer I fix a slip gate for the pigs to steal into the cornfield. It does not seem to hurt the pig so much when he thinks he is stealing. At the same time I still feed old corn, so as not to make too sudden a change.

When inclement weather no longer permits the hogging down of corn, the shotes are moved to the central feeding plant, where they get shelled corn from a 4,000-bushel self-feeder, which has 72 feet of feeding space, and will accommodate from 500 to 700 hogs on full feed.

To balance the ration, they help themselves to tankage and minerals from smaller self-feeders, and drink water from an ever-filled, non-freezing waterer. All the fattening hogs have access to the cattle feed lots, where they work over the droppings from shock corn, linseed-oil meal, and silage-fed steers, from which they secure laxative feed which keeps their bowels in perfect condition.

As to results: One year I had 927 head of hogs on the market and, so far as we know, lost only one hog. All these hogs were of my own raising and feeding. They averaged over the scales on the market, 317 pounds, at an average of little over ten months of age.

The following year we marketed 1,100 hogs of our own raising, 500 of which went to market before the break in the fall, the rest being immunized, and sent to the shambles at 370 pounds before any of them saw a birthday.

The dressing sheets on these hogs proved out a fraction less than 84 per cent, while the average market hog dresses from 78 to 81 per cent.

Make Cattle with Little Grain

So much for hogs. Now about my cattle:

In my opinion the popular style of feeding cattle in pre-war days is a thing of the past. I believe that the present method of making cattle with as little grain as is possible will continue after the so-called war-beef demand ceases. It is an economic factor which deserves much consideration. The danger of loss now is not so great as it used to be. With a long feed of corn, and with different prices of both feed and cattle, it became a case of rapid calculation.

It has been my experience that the full-feed method has proved satisfactory and profitable, perhaps because I watched all of the details and never let the situation get out of my hands. Another important factor is that I had the packer in mind when making beef, and always followed my cattle to the slaughter house to see how they dressed.

In handling cattle I didn't go into the business blindly. Before I bought feeders, the first thing I did was to consider the amount and kind of feed and roughage I had on hand, and then fed accordingly. Invariably the greater amount of roughage was fed the first third of the feeding period, lessening the roughage and putting them on full feed the next period, and then putting them on self-feeders of corn the last third of the feeding time. This gave the cattle a hard finish.

Cattle do well on a self-feeder, but they must be watched. They cannot be got to a full feed of ear corn and then turned to the feeders of shelled corn. What I do is to work them to a full feed of ear corn, adding shelled corn on the bunks, and then turn them to the feeders.

However, for the first few weeks I put ear corn in the self-feeder troughs, so that they cannot get a full mouthful at the start, continuing the feed in the bunks, but gradually lessening it as they find the self-feeders.

Now I feed for one hundred and twenty days, sixty of which I feed heavily of shock corn and silage. The last thirty to sixty days I feed a light feed of shocked corn, increasing the shelled corn, cottonseed and oil meal, and silage.

The last batch of cattle I fed got about [CONTINUED ON PAGE 50]

How to Get a Stand of Alfalfa

By M. N. Harrison

GETTING a stand of alfalfa is mostly a question of soil. If the soil is right your efforts will be crowned with success. Generally the problem is to make alfalfa succeed after you get the stand. Alfalfa requires a moderately dry soil, well drained even during rainy weather.

If the soil becomes water-logged for many days, the alfalfa will become yellow and unthrifty. It needs moisture, but it likes to have the moisture in the air and soil at the same time. This is the reason alfalfa does better in well-drained soils.

Although drainage is a big essential in successful alfalfa-growing, an occasional overflow of a creek or river will do no harm if it comes during the winter, or if the water is moving in summer.

Alfalfa will not thrive, nor even live long, without bacteria helping it. It has become used to them and depends upon them. Alfalfa-promoting bacteria will not live in all soils. Carbonate of lime makes the alfalfa or nitrifying bacteria thrive. They do not seem to be able to live without it.

While it is not known definitely why carbonate of lime makes the nitrifying bacteria do so well, many alfalfa growers advance the theory that alfalfa plants give off certain substances which are poisonous to the plant. That is, the alfalfa roots give off a poison that is injurious to itself and to other alfalfa roots. When there is much carbonate of lime in the soil this poison is in some way neutralized and the alfalfa is kept in health and vigor.

In addition to making the soil a healthful home for good and useful bacteria, carbonate of lime conserves humus and stops a waste of nitrogen. When plants decay in the soils nitric acid is formed. This is soluble and, unless taken up by the plants, soon leaches away. If there is a supply of lime present, the nitric acid unites with the lime to form calcium nitrate. This locks up the nitrogen and holds it.

Since the lime naturally sinks in the soil, it is best to put it near the surface. It ought to be mixed as perfectly as possible with the soil, as it is not effective when left in lumps. This is because the lime is not in contact with enough of the soil particles.

As ground limestone is harmless, a person may use as much of it as he wishes. It is pleasant to work with and doesn't burn like caustic lime when it gets on the skin, nor does it cake together if it happens to get wet. One may put it on the soil at any time. It may be put on with manure, as it does not burn out the humus. Soil acids attack the particles of limestone and are neutralized, but the lime itself does no harm, no matter how much is used.

How About Feterita This Year?

By F. K. Sanborn

FETERITA is one of the best forage crops the Western farmer can plant. It can be relied upon to furnish a crop of dry forage for the stock when every other crop has failed.

The seed bed is easily prepared. It is usually sufficient to disk, harrow the corn stubble, and plant the feterita directly. The best results have been obtained by drilling at right angles to the harrowing. This manner of planting will pulverize the ground better and place it in good condition to conserve moisture.

The feterita seed should not be planted until the ground is thoroughly warm, because the seed is soft, and will rot readily if it does not have a chance to germinate when planted.

Use from two to four pounds of seed to the acre. In Eastern sections four to six pounds of seed should be used to the acre. The germination test is important with feterita seed, as it determines definitely the quality of seed planted.

The time of planting varies according to the condition of the ground, but tests have shown that feterita may be planted from May 10th to May 20th in most States. No attention need be given to the crop until it is ready to harvest.

Feterita should be harvested immediately upon ripening because of its tendency to shatter. A large per cent of every crop of feterita is lost through shattering caused by allowing the crop to stand in the field after it is ripe.



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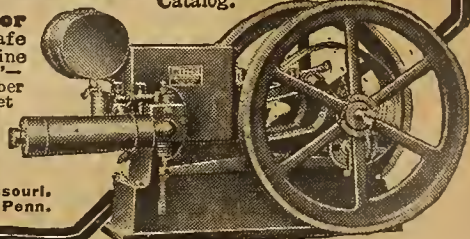
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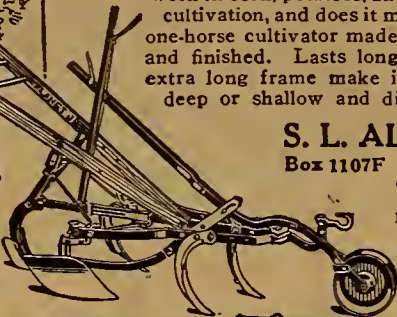
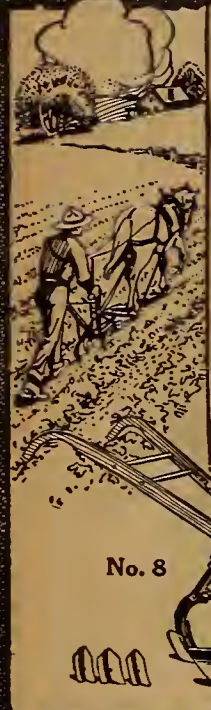
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What About \$2.26 Wheat?

[CONTINUED FROM PAGE 16]

63,000,000 bushels annually, which was less than one eighth of the annual net export of all wheat-exporting countries.

With the war over and the shipping conditions improved, most of our competitors in wheat exportation will enter the field. Australia alone has an enormous surplus, which has been estimated as high as 210,000,000 bushels, and it is claimed that Argentina has no less than 60,000,000 bushels. Moreover, France, Italy, and other European countries will themselves produce more wheat in 1919 than in 1918, and since they no longer dread a famine they will not wish to hoard wheat. The world price is therefore bound to fall, and it is hardly probable that America will be able to export more than 100,000,000, or at most 150,000,000, bushels of the 1919 crop. As we are likely, moreover, to carry over an equal amount from the 1918 crop, we may be faced on June 1, 1920, with a surplus of four or five hundred million bushels, or even more. In other words, we shall be forced to carry over an amount of wheat equal to the crop (perhaps 1,100,000,000 bushels), minus the domestic consumption and the wheat used for seed (600,000,000 bushels). The surplus on hand on June 1, 1920, is not unlikely to be over three fourths the entire annual consumption of wheat in the United States.

How are we to store this wheat?

This is a very grave problem, which must be solved if the Government guarantee is to be met.

Australia had not sufficient storage facilities, and as a result much of her wheat was spoiled and much was eaten by rats. Our total elevator capacity for wheat is only 350,000,000 bushels, and this includes public terminals, country elevators, and mill elevators.

All this capacity will be needed for the storage of the 1920 crop. If it is filled with the 1919 crop (and it is insufficient for this purpose alone), what is to be done with the 1920 wheat? Of course, our storage capacity for other grains may be used to some extent, but upon the whole these elevators are already greatly in demand. The problem could not be more serious.

It may lead to legal complications. Suppose John Doe of North Dakota notifies the Government that he has 2,000 bushels of 1919 wheat to offer to the United States Government at \$2.26 a bushel. The Government has no place to store it; the elevators are crowded. The railroads therefore will not carry it. Shall the Government pay for wheat that it cannot receive? On the other hand, the farmer will insist that it is not his fault there is no elevator capacity, that he raised the wheat in good faith, relying upon the Government guarantee, and that, while he is unable to move or store the wheat, he stands ready to deliver if the Government will take it. The farmer does not wish to burn wheat upon which the Government has promised him \$2.26 a bushel.

Not Enough Storage Space

What storage facilities there are, moreover, are likely to become rapidly congested. It will be to the interest of the farmer to deliver his wheat at the earliest possible date, especially as the Government guarantee lapses on June 1, 1920, and the farmer cannot hope to get a higher price by waiting. The millers, on the other hand, are not likely to buy wheat from the Government any faster than they actually require it, for they may well look forward to a progressive reduction in the retail price, and the price of the 1920 crop is likely to be still lower than that of the 1919 crop. There is a grave danger of coagulation at the wheat elevators, with general chaos as a result.

It has already been suggested that the situation might be relieved by allowing the farmer a longer time in which to deliver his wheat. This would be a proper proceeding if there were no chance of fraud. If, however, the time of the guarantee is extended beyond June 1, 1920, there is grave danger that the unguaranteed 1920 wheat in the hands of rogues will be mixed in with the guaranteed 1919 wheat, and will in this way secure an undeserved bounty.

The problem must be faced courageously. Shall the Government build new elevators? If it does the country will be burdened

with a large permanent investment which cannot be profitably utilized. Can the Government use temporary structures, cantonments, etc.? Whatever the case, it is important that our legislators and our officials charged with the administration of this act should attempt to solve this problem immediately. If the problem is not studied intelligently and efficiently we may be threatened with a maladministration of the act which will become a grave public scandal.

I have hitherto considered the maximum liability of the Government, the worst that is likely to happen. This greatest liability amounts to a total disbursement of perhaps three billion dollars, and a net loss by the Government of one billion dollars, not including the money that the Government may lose in the creation of new storage facilities. The loss may be even greater than that indicated, or it may be less. Whether it is greater or less will altogether depend upon the attitude of the farmers.

The farmers as a class are as patriotic as any other group in the community. They have shown their patriotism not only by their support of the war, but also by their record in times of peace. The farmer may therefore be expected to make as great pecuniary sacrifices for the welfare of his country as do other patriotic citizens. The farmer recognizes that a grossly excessive crop for the year 1919 will be a disadvantage not only to the nation as a whole, but also to the farming class in general, and to the wheat growers in particular. The larger the surplus of the 1919 crop carried over into 1920, the lower will be the price which the farmer can secure in the latter year. If in the spring of 1919 every possible acre of land is sowed to wheat, the 1920 crop will be a drag on the market. The farmer has therefore both a patriotic and, in a larger sense, a business interest in not unduly increasing the size of the 1919 crop.

Shall Burden Be Distributed?

Even under these conditions, however, it cannot be expected that all the men who this spring can earn either \$1,000 by planting corn or \$2,000 by planting wheat will plant corn. Many farmers will say:

"What does my little field amount to in this immense country? Why shouldn't I make a little extra profit?"

On the other hand, many farmers will, of their own accord, place a certain limit upon their production of wheat. They will see that the time is approaching when production of food must gradually go over from a war to a peace basis. Many a farmer will feel that he has worked hard, that he has made good money, so that he does not actually need the extra profit. He will feel that his farm is not in the very best condition, and that he is hurting his land by overcropping and by underfertilizing.

The farm-labor problem this year will probably be less difficult than last; but it is always difficult, and the farmer, after his strenuous activity, may feel inclined to go a little slow during the present year. He may put more of his land into hay and grass than in 1918. He may feel, even at a certain sacrifice to himself, that it is both fair and, in the long run, wise to consider the general interest of the country and the future interest of the farming class. It is possible, therefore, that the healthy group sentiment among farmers may result in a certain reduction of the 1919 spring wheat crop beyond what is feared. On the other hand, there will be sharp limitations to this reduction. There are millions of acres which are adapted to wheat, and to nothing else. There are other millions of acres in which the advantages of raising wheat under a guaranteed price are so overwhelming as to make that policy inevitable. While we may count upon the disinterestedness and self-sacrifice of hundreds of thousands of wheat growers, we cannot escape the conclusion that in all probability, despite everything that is done, the wheat crop will be larger in 1919 than in any year in American history.

The farmer is interested in the Government's maintaining its guarantee, but he also desires that the final burden resulting from this pledge should be fairly distributed. There are two groups upon either of which the burden of this loss can be

shifted. These two groups are the bread-eaters and the taxpayers.

The Government must sell its wheat abroad at whatever price it can secure—in other words, at the world price. It has been proposed, however, that a part of the Government loss of a billion dollars can be averted by artificially maintaining a high price in the United States. Under this plan, while the wheat sent to England might be sold for \$1.50, \$1.25, or even less, the wheat kept at home would be sold for \$2.26, plus the cost of handling. This plan, however, is crassly unjust. It would mean that the poor would pay. The day laborer with eight children consumes more bread than does the childless millionaire; he consumes more bread because of the responsibilities he has assumed in rearing children. He should not be further penalized by shifting this burden of one billion dollars to his shoulders. The price guaranteed for wheat was and is a war burden, and should be borne, like other war burdens, in proportion to the taxpayer's ability, and not in proportion to the amount of bread that each family is forced to consume.

To the farmer, as to all other citizens, our experience with this wheat guarantee raises the question whether such a policy is wise for the future if a similar emergency should again arise. It is probably too early to make a final decision on this question. In a sense the price guarantee was intended as an insurance premium against an insufficient supply of wheat. The Government agreed to take what might or might not prove to be a loss in order to stimulate production, and thus secure the wheat at a lower price than it could have secured it had the war continued and had there been no guarantee.

The Government is in the position of a man who has insured his house and paid the premium and whose house has not burned down. Had the war continued, however, for another two or three years, it is not inconceivable that the guarantee might have justified itself. It would in some measure at least have stimulated production, and this increased production would have prevented prices from soaring to an impossible height. On the other hand, even without a guarantee, the Government might have regulated prices indirectly by controlling the export of wheat. It could also have improved distribution, and could have commandeered the wheat at the market price and sold both wheat and flour at much lower prices to millers and consumers.

What might have been done, however, is no longer the question. The real problem is what is to be done now.

Situation Demands Study

On the whole, our course of action is clear. The pledge which the Government willingly took must be maintained, and the burden which the Government assumed must be distributed again among those best capable of bearing burdens. The present situation must be studied carefully, comprehensively, and, above all, immediately. A policy must be evolved with the co-operation of all interested groups, and the best administrative machinery that the country is capable of furnishing should be secured at once. The problem must not be made the football of partisan politics. It must be attacked by Congress, the Food Administration, and the Department of Agriculture.

The farmers of the country should also co-operate. It is a problem which affects them both as farmers and as citizens, and it is one, moreover, in which they possess expert knowledge. Upon the size of the wheat crop of 1919 and the manner in which it is handled depends the welfare of the wheat growers, not only in 1919 and 1920, but perhaps for several years thereafter.

We cannot leave the study and solution of this problem to the time when the greatest pressure is already upon us, but must seek in advance to relieve a situation which is clearly impending. More than patriotism is required, and more than good will. The problem cannot be solved, it cannot approach even a half solution, unless it is handled intelligently and in the interests of the entire country. Above all, it must be handled in time. We do not wish to appoint solemn commissions to lock the stable door.

"IF YOU Need Cash, Read This!" a practical article on the Federal Farm Loan System, in the May issue of Farm and Fireside.

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For years you have cheerfully complied with the Government's request to save material by repairing and using your old machines instead of replacing them with new ones. This need has now passed, but in its place stand two others, equally important.

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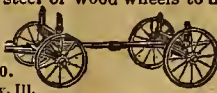
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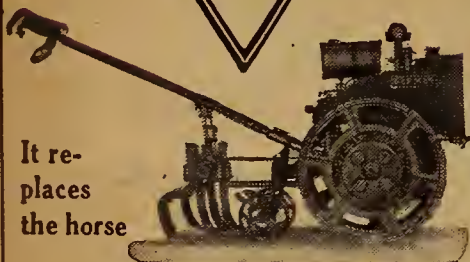
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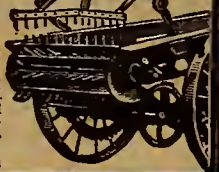
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Peonies for Your Garden

By Paul V. D. Hoysradt

WHEN you hear anybody speak of the peony, do you immediately think of the dazzling bright red flowers that grew in your grandmother's dooryard? If you do, it only shows that many people to-day have failed to keep up with the wonderful development of what is one of the world's most popular flowers. The most remarkable part of that development is that, while the history of the peony reaches back into the dim ages of the Chinese Empire, it is only within the last three quarters of a century that the beautiful new varieties have come into being. Where there was only one or two varieties of the peony a hundred years ago, there are now hundreds.

What marvelously tinted flowers many of these new types of peony are! Some are even more delicately shaded than roses; others are of dazzling whiteness and of striking brilliancy; and still others possess a most pleasing fragrance. If you should visit any large garden of peonies and see them right in the height of their loveliness, you would probably agree with a certain widely traveled woman who, upon seeing my father's large garden last spring, exclaimed, "Why, it is just as wonderful as the tulip fields of Holland!" The riot of color and the wonderful variety of tints that two hundred species of this



Which is the most attractive, the smile or the flowers?

flower present, blooming in massed formation, affords a sight worth going many miles to see.

Probably every extensive grower of peonies has his own pet methods for planting the roots, and these methods are bound to be more or less similar; but, at the same time, there are new ideas and helps steadily being developed.

During the time my father has been interested he has evolved his own favorite method of planting. The best time of year to set out the roots, according to his opinion, is during the fall. Any time after the middle of September is early enough, for the only thing necessary before taking up the root is to have the buds for another year matured, or "ripened," as the nurseryman calls it.

Here is his planting plan: A large round hole is dug about two and one-half feet deep and three feet in diameter. Of course, the peony root, when it is first planted, will not fill a quarter of this space, but the root growth is very rapid. Replace the subsoil with some well-rotted manure or decayed leaf mold so that the roots can get a favorable start.

The peony root itself should be planted in as rich garden soil as can be found, but have no manure in contact with the roots. The buds should be about two inches and not over three inches below the soil surface. Press the soil forcibly against each root, and with your fingers work it in among the nooks and crannies between the different off-shoots.

Before severe winter freezing begins, cover the crowns of the peonies with a light protection of leaves or straw, weighted to hold same in place. The first year's blooms may disappoint you, but just be patient; it requires some time for such a long-lived flower to become fully established in its new home.

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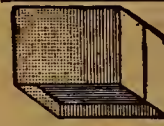
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Your Home Apple Orchard

By Lura Jean Moffit

I HAVE helped to plant, pick, and market fruit for a score or more years, and have taken a keen interest and enjoyment in every one of these operations mentioned, so I feel I have a right to express some of my opinions about home orchards.

Several objects should be kept in view when you select varieties for a home apple orchard—the best quality of fruit, a continuous succession, and varieties best suited for using fresh and for storing for winter. Then there is the quite as important question of hardiness of varieties and their suitability for the soil and climate.

Our experience has embraced a trial of many varieties, and for the home orchard of, say, 20 trees I suggest this list in their order of ripening for the corn belt and other wide areas of the country: Yellow Transparent, Duchess, Maiden Blush, Wealthy, Rhode Island Greening, Grimes' Golden, Jonathan, Rome Beauty, Senator, Stayman, Banana, King David, Delicious.

There are plenty more that are high-grade, but the varieties named are amply sufficient unless some apples can be disposed of locally. All of them are good for eating and cooking.

When My Bees Swarm

By G. C. Greiner

LET me say by way of introduction, I expected my bees in 1918 to do their part with a will in making amends for our sugar shortage, and they did not disappoint me.

That is the best of bees. If nature furnishes nectar within flying distance and fair weather for air traveling, the honey will be got into the hives. There are no slackers allowed in the beehive—except a few lubberly males, and they have to be tolerated.

I find that I can save many a valuable fruit and shade tree branch by using a hiving box instead of cutting the branch—which is the easiest way—on which the swarm rests, and shaking the bees on the entrance board of the empty hive.

This hiving box is merely a light shallow box having a rope handle provided with a hook. The box is hooked to a branch so that it hangs directly under the bee cluster. A quick shake detaches the bees into the box, and after they have quieted down I find they can be carried and emptied before the waiting hive without much difficulty.

The chances for successful hiving are much better as soon as possible after the bees cluster. As soon as a swarm leaves its hive, and probably before, scouts are in search of a new location which, when found and reported, starts the swarm for its new home.

Of course there are practical methods for preventing most of the swarming made use of by professional beekeepers. Keeping the colonies strong in this way prevents lost motion and unnecessary housekeeping by small swarms, and enables more workers to engage in honey-gathering, and results in more economic business control of our little bee helpers. So, my counsel to young beekeepers is, learn the tried and tested short cuts to getting the biggest honey yield from each hive.

He is Due This Year

By H. H. Haynes

THIS spring the 17-year locust will make us a visit. He will start showing up along in May and the early part of June.

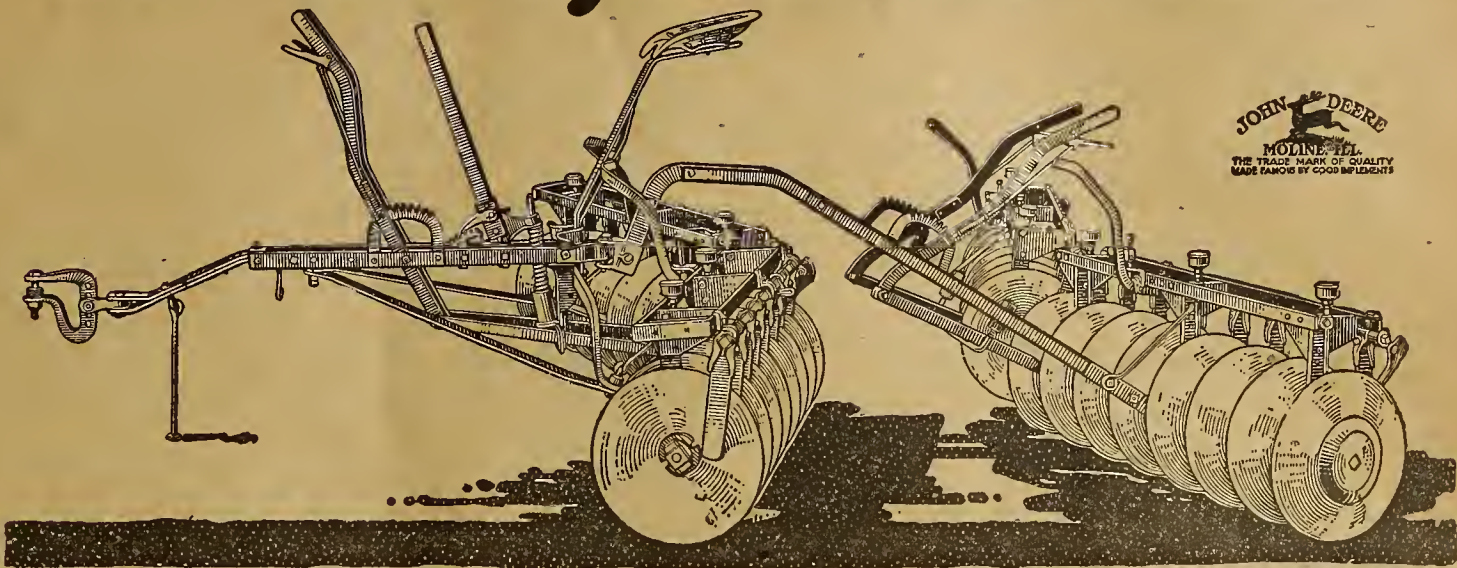
Agricultural authorities in Washington say that 1919 is likely to be one of the worst locust years on record; but these same men see nothing alarming in the prospect, so you have no cause to worry.

What little injury the locusts do always appears to be greater than it really is, and popular alarm is usually out of proportion to general damage.

Young fruit trees are sometimes killed by the cicada, so it would be a good plan to defer putting out any young trees until next year, postpone any budding operations you might have in mind, and do no pruning this spring.

When the insects begin coming out of the ground, hand-pick them from the trees or spray them with pyrethrum powder, kerosene emulsion, or a solution of carbolic or asetic acid. Later, when the insects are ready to begin laying, spray the young fruit trees with whitewash, as it is said that they object to crawling or sitting on a white surface.

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JOHN DEERE Pony Tractor Disc Harrow

THE JOHN DEERE PONY TRACTOR DISC HARROW is for use with any standard tractor—clevis is adjustable to suit height of tractor drawbar.

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Light running—no dragging around corners—rear gangs trail properly and run steady because the reinforced goose-neck connection to rear gangs is attached ahead of the front gangs.

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Flexible, oscillating scrapers, adjustable to keep discs clean under all conditions. All standard widths, with standard size discs. Easily converted into horse-drawn, single or double-action harrow by using proper hitch.

JOHN DEERE, Moline, Ill.

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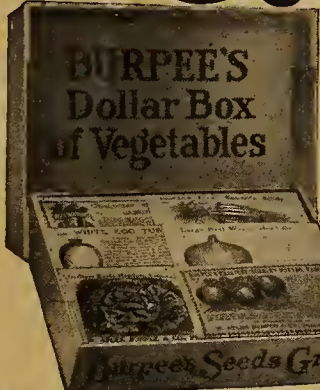
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Bean—Brittle Wax
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Chard—Lucullus
Corn—Golden Bantam
Lettuce—May King
Lettuce—Simpson
Onion—Wethersfield
Parsley—Curled Dwarf
Peas—White Icicle
Radish—Scarlet Button
Salsify—Sandwich Island
Tomato—Chalk's Jewel
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If purchased separately, this collection would cost \$1.60. With the Dollar Box we include Cultural Leaflet and Garden Plan drawn to scale. Complete garden for \$1.00.

BURPEE'S ANNUAL For 1919

Burpee's Annual is considered the leading American Seed Catalog. It contains a complete list of the best Vegetable and Flower Seeds. It will be mailed to you free upon request. Write for your copy today.

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"Be sure of Quality—
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—A. R. MOSLER.

Don't jeopardize the Tractor's Service by
handicapping it with inefficient porcelain plugs.

Use this specially constructed, unusually strong,
massive plug, properly designed and manu-
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"The Quality Plug"

It gives Sure Service—and lasting
satisfaction. \$2.00 each, at dealers—
or write us. (In Canada \$2.50.)

Superior also, for Trucks and high-powered Cars.

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tells the right plugs for all motors, write

A. R. MOSLER & Co., New York, N. Y.

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\$1.00, Spitfire (platinum point) Plug
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Export Rep.—Auto. Sundries Co.,
18 Broadway, New York City



19 YEARS OF LEADERSHIP IN SPARK PLUG MANUFACTURE

TO SAVE BABY CHICKS

Put this in the drinking water

Most people lose half of every hatch, and
seem to expect it. Chick cholera or white diar-
rhea is the trouble. The U. S. Government
states that over half the chicks hatched die
from this cause.

An Avicol tablet, placed in the drinking
water, will positively save your little chicks
from all such diseases. Inside of 48 hours the
sick ones will be as lively as crickets. Avicol
will keep them healthy and make them grow
and develop more rapidly.

Mrs. Wm. May, Rego, Ind., writes: "I was
losing 10 or 15 chicks a day from diarrhea be-
fore I received the Avicol. I haven't lost a
one since."

It costs nothing to try Avicol. If you don't
find that it prevents and promptly cures white
diarrhea and all other bowel diseases of poul-
try, tell us and your money will be refunded
by return mail. Send 25c or 50c today for a
package by mail postpaid. Burrell-Dugger Co.,
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POULTRY AND PIGEONS FOR PROFIT
Foy's big book tells all about it. Contains
many colored plates—an encyclopedia of poul-
try information, poultry houses, feeding for
eggs, etc. Written by a man who knows.
Sent for 5 cents. Low prices, fowls and eggs.
FRANK FOY, Box 4, CLINTON, IOWA

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The greatest in-
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any price. Built
round with a cen-
tral heater; no cold
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eggs. Perfect regulation of heat, ventilation and moisture,
roomy chick nursery, visible egg chamber easily accessible,
triple wall, water jacketed heat flume, sloping egg tray
keeps small ends of eggs always downward—enables chicks
to develop more perfectly. Economical to oper-
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express order, we ship at once, f. o. b. Quincy, Ill. For
shipment by parcel post include postage for 21 lbs. weight.
If you are not entire-

ly SATISFIED after

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we will refund all money you have paid. We
are responsible. In business in Chicago 46 years. Ask your
banker. You also need our splendid "Liberty Hatcher," 70
chick capacity, oil heated, self regulating. Weighs 14 lb. \$4.60 f. o. b.
Quincy, Ill. For larger incubators write today for special catalog.

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Cooked food is more palatable—more bulky—
more nourishing. Animals digest it better and
thrive. Poultry must have warm food if you
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cows water with the chill
off and see the improve-
ment in the milk.

Have ALL
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WATER
YOU WANT

IT PAYS BIG

FARMER'S FAVORITE

Feed Cooker and
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For butchers, sugarmakers, poultrymen,
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Portable; use indoors or out, as boiler or
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anything. Guaranteed.

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LEWIS MANUFACTURING CO.
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BABY CHICKS

Superlative quality. 11 cents
each & up. 24 leading breeds.
Satisfaction guaranteed.

Catalog free. Springfield Hatcheries, Box P, Springfield, Ohio

Baby Chicks 10,000 each week after March
15th. 20 varieties, utility and
exhibition stock. \$14.00 per 100 up. Circular and price list
free. Stamps appreciated. Spencer Hatchery, Spencer, O.

\$10.95 140-Egg Champion Buys Belle City Incubator

Hot-Water, Copper Tank, Double Walls Fibre Board,
Self Regulated. With \$6.35 Hot-water 140-Chick Brooder,
both only \$15.95. Freight
Prepaid E. of Rockies.
Guaranteed. My Spe-
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ways to make extra
money. Order now or
write today for my
Free book, "Hatching
Facts"—It tells all. Jim Rohan, Pres.
Belle City Incubator Co., Box 100, Racine, Wis.

How to Prevent White Diarrhea

Dear Sir: I have raised poultry for
years and have lost my share of little
chicks from White Diarrhea. Finally I
learned of Walker's Walko Remedy for
this disease, so sent for two 50c packages
to the Walker Remedy Co., Dept. 226,
Waterloo, Iowa. I raised over 500 chicks
and never lost a single one from White
Diarrhea. Walko not only prevents White
Diarrhea, but it gives the chicks strength
and vigor—they develop quicker and feath-
er earlier. I have found this company
thoroughly reliable and always get the
remedy by return mail. Mrs. L. L. Tam,
Burnetts Creek, Indiana.

Don't Wait

Don't wait until White Diarrhea gets
half or two-thirds your chicks. Don't let
it get started. Be prepared. Write today.
Let us prove to you that Walko will prevent
White Diarrhea. Send for 50c box on our
guarantee—your money back if not satisfied.
Walker Remedy Co., Dept. 226, Waterloo, Ia.

Eggs and Berries—a Double-Header

By M. J. Carl

GROWERS of small fruits who own a
limited number of acres often feel that
their land is doing only half duty during a
large part of the year. Noting that an
Eastern strawberry grower gave his success-
ful experience in FARM AND FIRESIDE,
describing how he got double value from
his land by using his strawberry fields for
a poultry range, leads me to relate how a
Middle Western raspberry grower, Mr.
W. E. Miller, is materially increasing his
revenue by using his two acres of rasp-
berries as a range for his flock of 250 layers.

Mr. Miller finds that during the greater
part of the year his berry field is a gainer
from the ranging of his hens. One impor-
tant advantage is the greatly reduced num-
ber of injurious insects which formerly did
much damage to both berry canes and fruit.
It is a mighty alert insect that now escapes
the five hundred prying eyes of his con-
stantly ranging flock of hens, and the
young and tender sprouting weeds and
grass go the same way as the insects.

His hens also greatly reduce the amount
of cultivating which formerly was necessary.
He encourages this hen-power cultivation
by scattering a few oats as he operates a
horse cultivator. The result is that five
hundred active scratching feet are kept
constantly stirring the surface soil until
every grain is found. This systematic con-
trol of exercise keeps his hens fit and
healthy, and his egg yield from the same
strain of layers is considerably higher than
when his flock was yarded in a much smaller
enclosure.

Since his hens spend most of the day-
light hours ranging his berry fields, the
manure that formerly overfertilized the
poultry yards, which were rotated for
gardening, is now giving much better
profit, and sanitary conditions around his
poultry houses are much improved. The
berry crop is also heavier and the fruit
quality is improved.

Now for the disadvantages, which are
not difficult to counteract: When the
tender canes are first shooting up early in
the spring, and weeds and grass in the berry
fields are scarce, the hens have to be kept
out of the berry fields for about two weeks
until the young shoots toughen. Also,
when the berries are ripening and during
the picking season the hens are kept from
the berry fields a portion of each day, and
at times altogether for about three weeks.
During this period they have a large yard
which has already grown an early crop of
peas or other early crop, and the hens are
kept busy and contented with plenty of
alfalfa for green feed and grain cultivated
into the soil of their yard.

The Antwerp raspberry is found most
profitable by Mr. Miller for double crop-
ping with hens for his private market trade.
His sales last year were 200 crates at an
average of \$1.43 a crate, and 350 crates to a
fruit cannery at 5 cents a pound—about
90 cents a crate.

His egg receipts from the first of March
averaged \$50 a month, until the hens
slacked up during molting in September.
The combined receipts for the six-months
period for eggs and berries was something
over \$900. This year the number of layers
is to be increased, as Mr. Miller is satisfied
that his berry-field range will safely carry
a larger number of hens and the income and
profit can be made accordingly higher.

Grain Sorghums for Poultry

GRAIN sorghums—kafir, milo, dura,
feterita, etc.—are filling a larger place
than ever before as scratch feed, and good
results are being secured from feeding
these grains, which are quite similar in
composition to corn, except that they are
only about half as rich in fat content.
For this reason the sorghum grains can
better take the place of wheat, particularly
for the heavier breeds, which are inclined
to take on too much fat when fed too
heavily on corn. The sorghum grains,
being small, are better to induce scratching
and exercise than the whole corn, and are
better adapted to feeding young chicks.

A FARM AND FIRESIDE subscriber, Mrs.
Mary Oliver, says she always starts her
baby chicks with the sorghum grains, as
she finds less danger from bowel trouble
than from any other kind of grain. Her
experience is that all kinds of poultry
prefer sorghum grains to corn, and when
fed a variety they will eat the sorghum
first.

Get Your Farm Home from the Canadian Pacific

THE Canadian Pacific Rail-
way offers you the most
wonderful opportunity in the
world to own a farm in West-
ern Canada. It will sell you
land for \$11 to \$30 an acre
or \$50 an acre under irrigation.

20 Years to Pay

You pay down 10% of the
purchase price and have
twenty years to pay in full
at 6% interest.

\$2,000 Loan to Farmers

The Canadian Pacific Railway
will loan to approved settlers on
its irrigated lands up to \$2,000
in improvements with twenty
years to pay back the loan at 6%
interest.

Land Under Irrigation

In Southern Alberta, we have
developed the largest irrigation
undertaking on the Continent.
This district consists of some of
the best land in Western Canada.
An unfailing water supply is ad-
ministered under direction of the
Canadian Government—no con-
flict of law or authority over its use.
This land is offered on same easy-
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Prices ranging up to \$50 an acre.

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To make investigation easy, spec-
ial railway rates have been ar-
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M. E. THORNTON
Supt. of Colonization

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Tells Why Chicks Die

E. J. Reefer, the poultry expert, 4034 Poultry
Bldg., Kansas City, Mo., is giving away free his valuable
chick book entitled "White Diarrhea and How to Cure It."
The book tells how to prepare a simple home solution that
cures this terrible disease over night and actually raises 98%
of every hatch. It is absolutely free. Every poultry raiser
should have one. Write Mr. Reefer today for your copy.

Save the Baby Chicks

Our book, "CARE OF BABY CHICKS," and a
package of GERMOZONE are the best insurance
against chick losses. Those formerly losing more than
half their hatched now raise better than 90 per cent.
To you who have never tried GERMOZONE, we will
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if satisfied, 75c; 60 days' trial. We trust you.

Druggists and seed dealers sell GERMOZONE, the
best poultry remedy and preventive. For old and
young—bowel trouble, colds, roup, musty or spoiled
food, limber neck, chicken pox, sour crop, skin disease,
etc. Sick chicks can't wait. Do it now.

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Baby Chicks
25 Leading Varieties—Safe delivery guar-
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equipped hatcheries in U. S. Catalog FREE.
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Keeps Flies Out
of the House

Flies will not stay in a room
where it is grown. Very mys-
terious, but tests show such to
be the case. Blooms (60 days
from planting). Flowers sum-
mer and winter. To introduce
our catalog, we will give the
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The Wonder of the World
Roses on them in 8 weeks from
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WEEKS Winter and Summer.
Bush when 3 years old will have
5 or 6 hundred roses. Grows in
the house in winter or in the
ground in summer. Roses

The Year Round. Pkt. of seeds with Guar-
antee, also above Shoo Fly Seeds. Both
mailed with handsome Japanese Catalog for
Japan Seed Co., Box 134, So. Norwalk, Conn.



How to Move Trees

By M. Baird

CHARLES A. SCOTT, state forester of Kansas, tells us that transplanting large trees is practical in winter. In describing the proper method, he says:

"A trench is dug around the tree to be moved in a period of weather when the ground is not frozen. The ball of earth containing the roots is allowed to freeze solid. Then tree and ball of earth, containing from one to five tons of soil, are transferred to the new location. A derrick is commonly used in lifting and placing the tree.

"Great care must be taken in handling the tree to avoid bruising the bark. The hole into which it is to be set should be dug at some convenient time when the ground is not frozen. The soil thrown out should be covered with manure to prevent freezing, so that it may be used for filling in about the roots when the tree is set in place.

"Caution must be exercised in setting a tree to see that it stands erect, and that the soil is uniformly packed about the ball



Little handwork is needed when a good machine will do the trick

of earth containing the roots to prevent the tree from settling to undesirable angles. To accomplish this it is advisable to keep a stream of water running into the hole while it is being filled in. February and March are the favorable months for work of this kind."

Fall planting for any kind of tree is often a waste of time, work and money, according to Forester Scott. Fall-planted trees are subject in dry winters to drying out by alternate thawing and freezing. Moisture is also carried off by drying winds in the winter months.

Trees that are transplanted in the fall do not develop a new root system until the following spring. Consequently, the sap is carried off in dry winters by alternate thawing and freezing. This causes the tree to perish. This is doubly true of evergreen trees because they are in full foliage the year round. They give off moisture through the stomata, the breathing pores of the leaves. In more humid regions fall planting is practical because there is little danger of excessive drying.

The logical time for pruning trees is the late fall or early winter, asserts Mr. Scott. Trees that are pruned in the spring are likely to bleed.

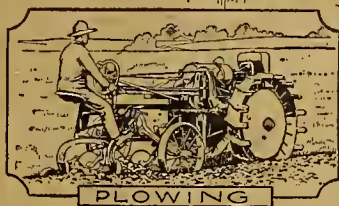
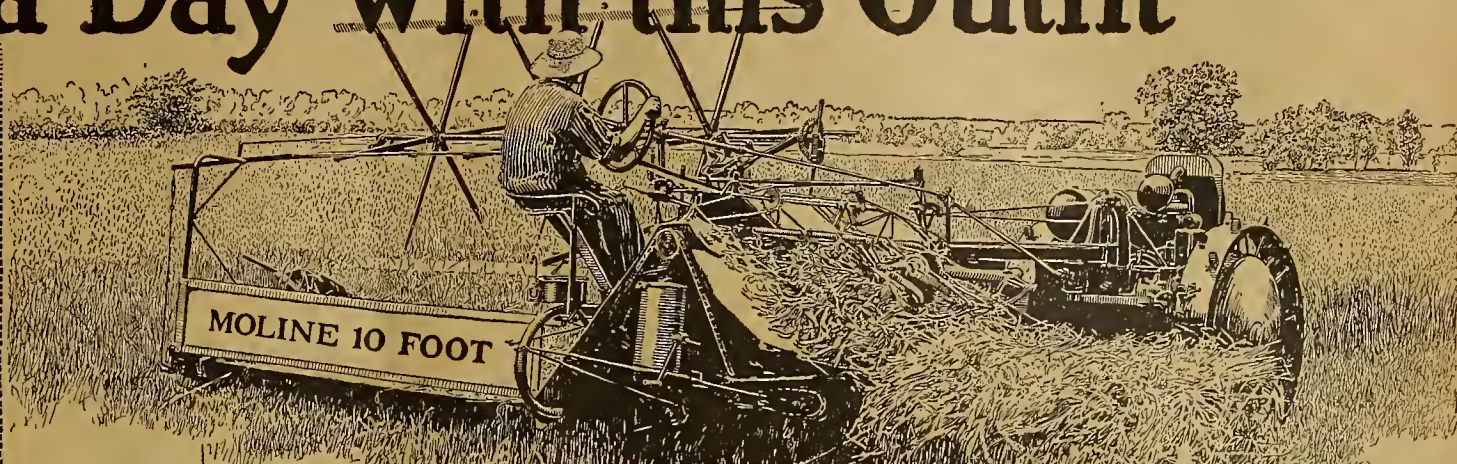
"Trees should be pruned with a sharp knife or saw, and the wounds painted at once to avoid fungous infection. It is best to use white lead, asphaltum, or coal tar as a disinfectant.

"The pruning of shade trees differs materially from the pruning of fruit trees. The object in trimming shade trees should be to carry the crown high enough so that it will not interfere with the use of walks and yards. The trees should be symmetrically developed with well-balanced crowns."

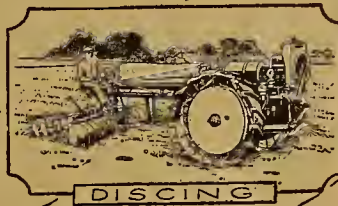
Pruning should be started early in the growth of the tree, according to Forester Scott. A little pruning each year is vastly more important than a severe pruning after the tree has been neglected for a number of years. In the early pruning all tendencies to develop a crotch should be corrected. The longer this is delayed the more difficult it is to develop a well-balanced crown.

Never cut the tops out of old trees with the hope that they will develop new tops much more dense than the former. Cutting off large limbs in a tree results in its dying back several inches, and in subsequent development of fungous growth which will follow down into the living wood, ultimately causing the heart of the tree to become rotten. The life of the tree is thus shortened many years.

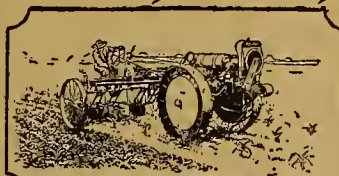
One Man Harvests 40 Acres a Day with this Outfit



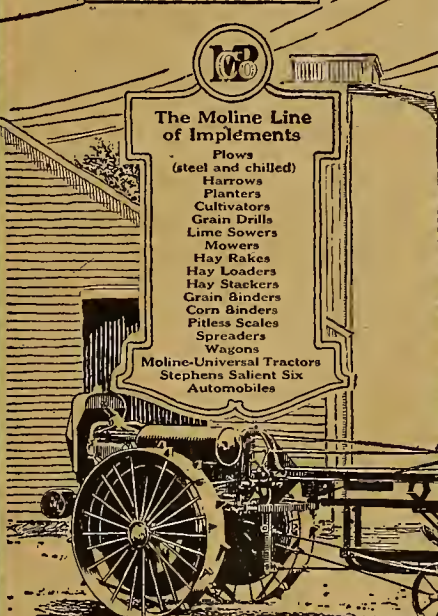
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Plows (steel and chilled)
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Grain Drills
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Spreaders
Wagons
Moline-Universal Tractors
Stephens Salient Six
Automobiles

MOLINE UNIVERSAL TRACTOR

and the new

Moline 10 Foot Grain Binder

This new Moline 10-ft. tractor binder attached to a Moline-Universal Tractor running 3½ miles per hour, with one man in control of both tractor and binder, will cut 40 acres of grain in a ten-hour day. This is more than 2 men and 8 horses with two 8-ft. binders can do; and more than 3 men with any other tractor pulling two 8-ft. binders can do.

Considering the amount of work it will do, and the saving in expense, the Moline 10-ft. binder is the lowest priced binder ever made, and it will last twice as long as any other. But of greater importance is the fact that you can now harvest your grain when it is ready in half the time you ever did before—this may save you the price of the entire outfit any rainy season.

The Moline 10-ft. Binder is made to work with the Moline-Universal Tractor. One man controls both tractor and binder from the seat of the binder. The entire outfit is easily and quickly backed to turn square corners so that a full width of cut can always be maintained. The new Mobile Binder is constructed heavily throughout and has much greater capacity than any horse drawn binder.

Equipped With Hyatt Roller Bearings

Important bearings 32 in all, are equipped with Hyatt roller bearings. These bearings double the life of the binder, allow it to run at much faster speeds, make lighter draft and require only one oiling a season. This feature alone saves one hour or more a day. Elevator gears are enclosed and packed in grease. There are many other features about this binder which enable you to harvest faster, cheaper and better than you ever did before.

A header attachment is provided so that the Mobile Binder can be easily, and at small expense, converted into a header.

If you have only 20 acres of grain to cut, it will pay to own this outfit. You will pay for binder cutting your own and neighbor's grain.

It will pay you to use the Moline-Universal Tractor and Moline Grain Binder this year. See your Moline Tractor Dealer now or write us for full information.

Moline Plow Company, Moline, Illinois

Manufacturers of Quality Farm Implements Since 1865

Moline Tractor Works Year 'Round

After harvesting you can use your Moline-Universal Tractor to run a small separator and do all the threshing in your neighborhood. There is no end of uses for the Moline-Universal Tractor. You can plow, disc, seed, cultivate, mow, harvest, etc., and do all your belt work with it.

The Moline-Universal Tractor does all farm work including cultivating, and one man controls both tractor and implement from the seat of the implement.

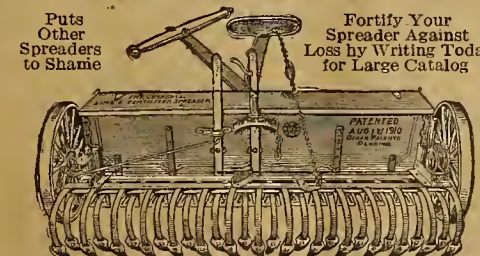
Thousands of farmers in all parts of the country are proving every day that the Moline-Universal is the most practical, economical and efficient tractor made, that it practically doubles a man's results and reduces expense.

CHEAPEST WAY TO PULL STUMPS

Try It 30 Days Free! If satisfied after trial, keep puller. If not pleased, return at our expense. You don't risk a penny. Four easy ways to pay.

KIRSTIN One Man Stump Puller
Weighs less! Costs less! Has greater speed, strength, power. Man alone pulls stubborn stumps! Get Free Book—Special Agent's Proposition. Write: A. J. KIRSTIN CO., 2107 Lud St., Escanaba, Mich.

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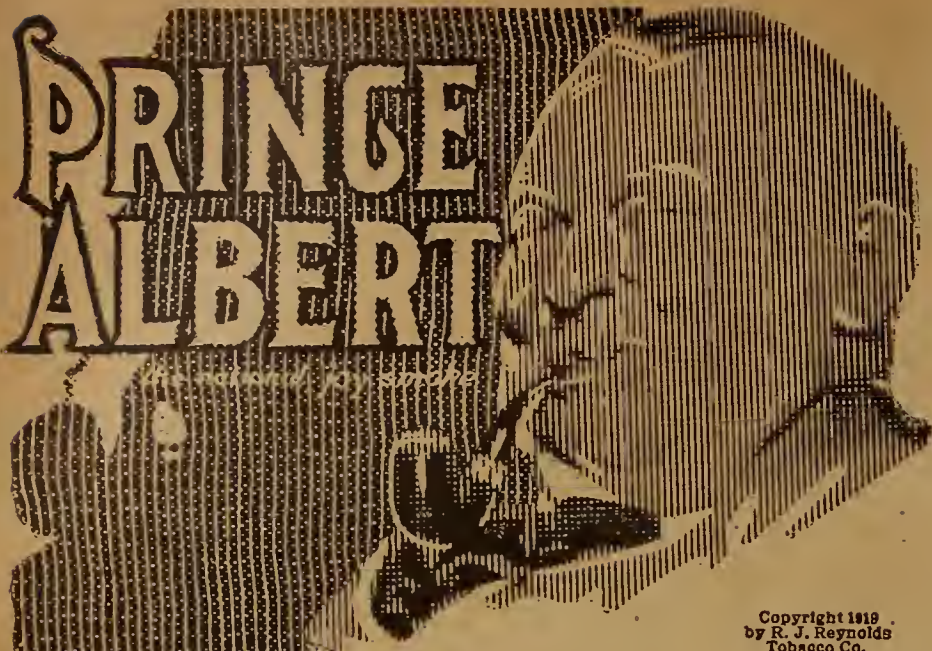
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The World Wants Beef

By J. B. Gingery

MAYBE you are one of those who have kept their feed lot going during the war, even though there wasn't always a profit when the packer gave you your check. Maybe the crops failed, and trying to feed cattle was out of the question, and you had to turn your food production efforts into other channels. But conditions have changed. Now is the time to get back into the game good and strong. We American farmers have got to put the beef industry back on its feet for the world.

Never before has it been so important to the world at large to have the beef industry do its best in feeding the nations as now, and to restock for the future. If we as a people consume more than we produce, if we fail to utilize every bit of roughage, if we neglect to use every acre of pasture, either for beef-making or breeding for the future supply of breeding cattle for Europe, then we are slighting this vital part of our duty.

A few years ago the great ranges, which were the source of supply, exceeded the demands of the non-producing States. The corn-belt feeder could buy his cattle on the ranges cheaper than he could produce them on his high-priced land. Year by year more of them went to the ranges for their feeding cattle, and year by year fewer cattle were bred in the corn belt and the East. Each year two vital factors have been working constantly, and are beginning to make themselves felt: First, the population of our country is increasing at the rate of two million a year; second, each year sees a greater number of acres taken from the range by the small settlers. Hence, the United States is called on not only to supply a heavy demand at home, but also to feed Europe, as it is doing at the present time.

The small settler, however, when he catches his stride, will prove a valuable help rather than a hindrance, for there is no question that more cattle can be produced on the same area handled on a small scale, and stocked intensively, than on others which are handled as part of a large area.

To the casual observer it would appear that we must at once right about face, and start in anew everywhere to increase the supply. Fortunately, however, this start has been made, and has gained marked headway. During the last few years men in the range country who have had their fingers on the pulse of supply and demand have noticed a constantly increasing inclination on the part of corn-belt feeders to get back into the breeding business. This can be explained in part by the fact that each year has seen cattle gradually getting higher, until the balance swings back, and they can again consider producing a few cattle on their high-priced land as against what they can buy them for on the range. Their breeding supply can only come from the great range country. The corn belt and the Northeast have always produced some cattle, and they are especially strong on registered stock, but this cannot be considered in supplying the demand.

As a result they have grown careless in their breeding, and in breeding, as in everything else, there is no such thing as obtaining a height and standing still; one must either go up or down. Feeders in the corn belt and other regions must naturally come to the range for their supply. Last fall saw Texas range cattle for breeding purposes scattered all over the South and East, some of them going as far as Connecticut, New Hampshire, and Maine. We have at least got a flying start toward increased beef production. The whole Southeast is beginning to realize its possibilities in producing beef on thousands of acres heretofore comparatively non-productive.

It is fair to assume that no other thing could have the same influence in encouraging the South to exert itself in increasing

beef production as will the war. From a financial point the farmers in the South have every reason to hope for fair returns from the outset. Their first step is the wholesome eradication of ticks. This is planned, and the State, the county, or the community that remains inactive and permits the country around it to outstrip it in this great work is sure to see the time when it will be compelled to be contented with a smaller share of that reward for clean-up work which comes in direct relation to when the start is made.

Tick eradication means more beef. This is doubly true when one takes it in connection with the change that will naturally follow replacing the primitive cattle with cattle of better breeding. The South is not going to be slow in turning toward this part of the industry. Much headway can be made by the use of registered or high-grade bulls on native cows, and each year carefully culling the cow herd.

Perhaps never before in the history of the cattle industry has the market held forth a promise so fine to the producer of this class of beef. Nor has there been so favorable a time to pass through the evolutionary period. The great demand for meats makes this class of beef attractive as against what it would be in normal times. It is an ideal time for the South and East to make hay while the sun shines, by breeding up their cattle. Europe will continue to buy beef for some time to come. It would seem therefore that the country which is just beginning to develop has reasonable expectation that by the time the enormous demand begins to let up it should begin to approach the time when its cattle can take their place with the best in the country.

There is also a side to it which touches patriotism for this undeveloped country to produce beef at a time when concentrates are in keen demand. These feeds can be exported and a great many of them used at home. The abundance of forage in the South and Southeast, if properly utilized, will produce a great supply of beef.

When one takes into consideration the three factors, conserving concentrates, producing beef from roughage, and the demand for this class of beef, and the fact that this is practically the only class of beef the South can produce for a few years, it is obvious that the farmers should not fail to grasp their opportunity.

Apart from the financial side, every true, loyal American owes it to his country to do his best toward fitting America not only to feed herself, and to be in a position to restock Europe, but also to take its place at the head of the nations in the great industrial struggle which is sure to come now that the war is over, and which can be the only solution to Europe's problems.

Europe has the advantage of us in years and experience. Then let us not sit idle for a day, for he who only grows one pound of beef where more could be grown is welding a weak link in our chain of defense in the coming struggle. Whenever we do anything to raise our breeding standard, we are at the same time strengthening our national fortifications, and thus better preparing ourselves to stand the brunt of the charge in the industrial war.

As compared with other industries, and the abnormal demands made upon all of them, the cattle industry at least has a fair start—in fact, a bright outlook—and the United States, with its great ranges as breeding grounds, strengthened by the return to breeding in the corn belt and the Northwest, and the awakening of the South and Southeast to undeveloped possibilities, should be a great factor in putting the nation where it should stand in the future.

The need is now apparent, and will increase each day. It rests with stockmen in this country and our citizenship at large to renew their efforts and keep everlastingly at it.



Pasture for Live Stock

By Thomas J. Delohery

SOY BEANS in the corn, for pasturing sheep and hogs, is highly commended by P. J. Horn of Porter County, Indiana, for twenty years a producer of prime native lambs, good hogs, and fine beeves. Last year Mr. Horn had 100 calves on feed, 300 hogs, and 100 ewes:

Mr. Horn fences off a 20-acre patch of corn each year, and in this sows soy beans, so that he will have a "balanced" pasture. He sows the beans with the corn, mixing the two seeds together in the planter box. In order to sow both seeds at once, he drills his corn.

"I sow about 2½ bushels of beans on the 20 acres, drilling it in with the corn," said Mr. Horn. "After drilling a row I mix the seed, because the beans are heavier than the corn and have a tendency to work to the bottom of the seeder, and as a result, if not mixed occasionally, I would be planting all beans and no corn."

"Previous to planting, the field must be put in a fine condition and dragged. Have no trash around. In plowing the corn, it can be done only one way, for there is no room between hills, this space being taken up by the beans. The soy beans are ready for pasturing when the corn is dented."

"About two weeks previous to letting the hogs and sheep into the field, I cut a little of the beans every day, and feed it to the hogs and sheep as hay, so that they will become accustomed to it. The first time I turn the sheep and hogs in the field I wait until the afternoon, when the stock is pretty well filled. I then turn them in for a few hours, so that they will not overeat. I do this for a few days, and then take down the fence and give them the run of the entire field."

Dehorning Cattle

By M. N. Harrison

IT IS the common practice of many stockmen nowadays to dehorn the stocker and feeder cattle or calves they intend to keep for feeding. The chief advantages of dehorning are convenience and economy in the feed lot and in shipping, with a slight increase in market value.

Animals being fitted for baby beef should not be dehorned, as with horn breeds the age can be told approximately by the horn, and when the horns are removed the buyer may suspect the animal of being over the age limit, and consequently cut down on the price.

If a feeder is raising his own calves, the best method of dehorning will be found to be an application of caustic soda or caustic potash when the calf is a few days old, at



A dairy herd to be proud of

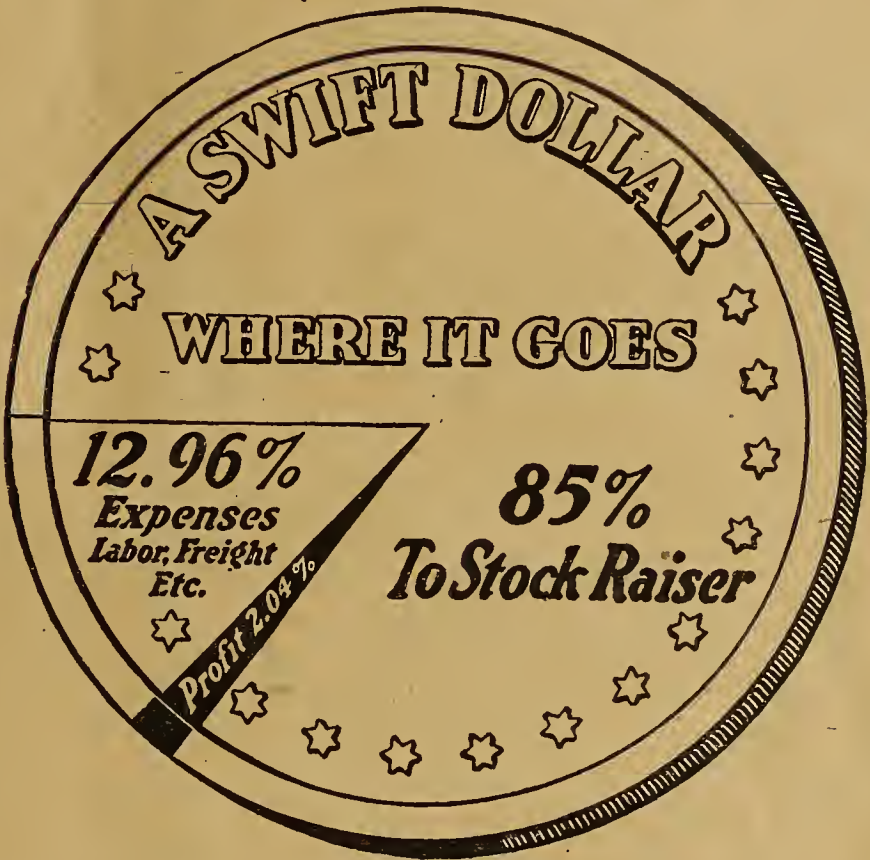
the time when the button can be felt through the skin.

Wet the stick of caustic slightly, and rub it well into the skin over the horn after first clipping the hair off the region. Do not get the stick too wet or it will be likely to run down over the side of the head, burning off the hair and causing needless pain.

When dehorning is not done at this time, it is advisable to wait until the horn has made a fair growth and then use either the saw or the clippers. Clippers are quicker and less painful than the saw. They make a cleaner cut. In either case the horn should be cut a little below the union of the horn and the skin, or it will begin to grow again.

For most parts of the United States the best time to dehorn is the first part of April or the latter part of October—that is, neither in really cold weather nor fly time.

The Swift Dollar
for 1918



The above diagram shows the distribution of the average Swift dollar received from sales of beef, pork and mutton, and their by-products, during 1918.

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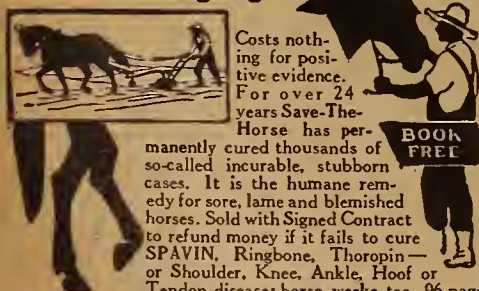
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How I Make My Hogs, Cattle, and Sheep Pay Me Big Money

[CONTINUED FROM PAGE 40]

54 bushels of corn and about 2,800 pounds of silage per head, and put on about 300 pounds gain per steer. In pre-war days the cattle were fed longer, and consumed from 68 to 70 bushels of corn per steer, on a ration which consisted of a full feed of corn, silage, oil meal, and cottonseed meal. This feed usually lasted for six months, however. The cattle attained a hard finish, and dressed out as high as 64 per cent.

The best gain I got on a drove of cattle was 120 pounds a month, or four pounds a day. Usually it ran around 70 pounds a month, and this is a very good average.

I am a believer in regularity of feeding and in a variety of feed, and I still think the old-fashioned shock corn is hard to beat. I use silage, and with it mix cottonseed and oil meal for a balance to the ration, making a conditioner for both cattle and hogs.

When feeding corn to steers I always aim to have hogs behind them. Steers do not fully digest the corn they eat, and the hogs get a lot of it by working over the droppings.

Last winter I fed four times a day, a feed of shock corn, followed by a feed of silage with cottonseed meal and shelled corn mixed thoroughly with silage; the same in the afternoon, but substituting linseed-oil meal for the cottonseed meal. The cattle came to the fourth feed with good appreciation and surely made a good gain and finished well.

Into this bunch, which I fed in the barn, open on three sides, I used eight acres of heavy shock corn and 500 tons of silage, and 15 tons each of cottonseed and linseed oil meal to 113 cattle, besides using many tons of straw for additional bedding. All this gave me a large amount of strong fertilizer for the farm—approximately 500 tons, which was all well rotted and easily distributed with manure spreaders in the fall over about 50 or 60 acres.

I buy all of my cattle usually about Thanksgiving time, when the run is still coming, and just ahead of winter. Feeding in the barn in the winter and, if necessary, right on in the lot in the summer, until they are ready to go, is my plan.

I never let the cattle lose their appetites, because this increases the overhead expense. There is overhead on the farm just as there is in any other business, and reducing it to a minimum is one means of increasing the efficiency to a maximum degree.

Sheep Cut the Overhead

Now about sheep:

Sheep have a place on my farm as a means of reducing the overhead in the way of cleaning up the waste. There is on most every farm enough waste to support a bunch of sheep. Very little grain is fed to my sheep, although I sow pasture especially for them, but keep the sheep at the work of cleaning up until all available waste has been consumed. The business of salvaging belongs to the sheep.

At the present time I have 300 head of Western ewes.

I have bred these Western ewes to Shropshire bucks, this being the idea of Prof. W. C. Coffey of the University of Illinois, who is one of the leading sheepmen of the country. He has found that this cross is a good one. Before this he advocated crossing Southdowns, I believe, on Western ewes; but later experiments proved that the Shropshire cross was better.

My lamb crop generally runs around 150 per cent. This I attribute to according the sheep the proper care they need, both during the growing and lambing season. Sheep are delicate animals, and will not stand much ill care. At times their ability to stand hardships is amazing, but in other instances they are easily subdued.

I am to have my lambs come about the first of April. At this time the weather is not so hard, and the danger from loss through inclement weather is smaller than with earlier lambs. Of course, if one were to market the lambs early this idea would not be very good, as it would land the stock on a poor market; but I believe in making heavy lambs, and market them when they are what the market calls lambs, but about a year old.

I don't feed the ewes anything until a little before lambing time, because I want them to clean up everything about

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the place. I use them to follow the hogs in pasturing soy beans, corn, and rape, so that there is no waste. I feed them in the winter after the stalk fields are bare.

After the lambs come, and for a short time before, the ewes get a little ground feed of what we grow at home. This ration is continued until the lambs are ready to go to grass. Then I take the feed from both lambs and ewes, and they begin to shift for themselves.

My sheep are the balance to my feeding business, because, as I said before, they clean up after the hogs which follow cattle.

I am feeding my sheep shock-fodder corn and soy-bean silage through the winter, instead of straight grain. This cuts the cost of maintenance, and I believe they will do just as well.

I have a special pasture for sheep, but usually turn them on the winter wheat and rye first. Rye makes a good early pasture, and they get a world of feed off the wheat, pasturing it until jointing time.

Rotation of sheep pasture is a necessity. I have found this from experience. I had to sell my ewes last year because they got wormy. I found the grub worm most bothersome. However, there is a remedy for this; but curing the sheep of worms is a hard job.

I have found that the ewes pick up the worm on pasture. It lays the eggs in the nose, and hatches out a worm which gets

Thanks for Your Letter

THAT little "What's on Your Mind?" note in the February issue certainly gave us the job of a lifetime. We have had to sit up nights to read your letters. And, believe us, they are worth sitting up nights to read. Keep them coming. Those demanding personal, immediate answers we have answered, and will continue to answer right away. Some others we are keeping to print so all of you can read them. It's funny the different ways we seem to strike folks. But whether you swear at us, or by us, we know you are sincere, and we try to profit by what you say, because we too are sincere. And there's no better way for us to keep in close touch with each other than by letters. Again we say: Keep 'em coming. Good luck to you all.

THE EDITOR.

into the brain and kills the animal. I have found that liming the sheep's nose is a good way to get rid of it. This will cause the ewe to sneeze and cough, and throw out the fly or eggs. Then disinfect the nose with pine tar.

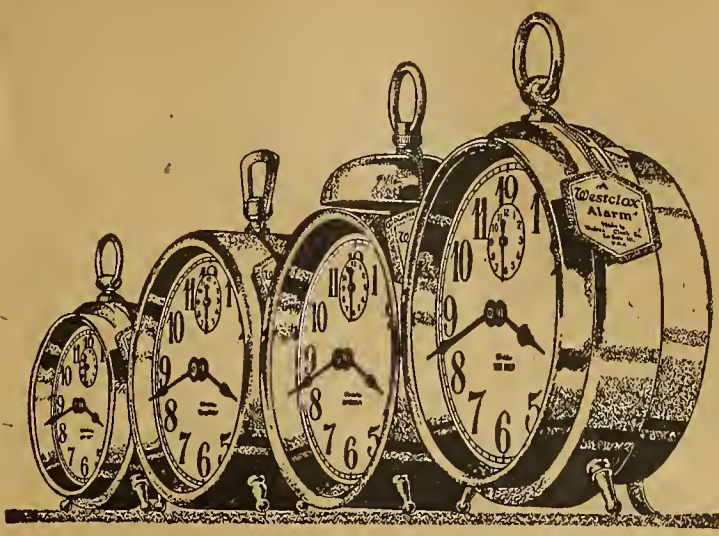
This remedy is good in the spring, when the flies are prevalent. If it rains, however, it is necessary to do it over. A better way, I have found, is to take a log and bore holes in it large enough for the sheep's nose. Then put salt at the bottom of the holes, and smear pine tar around the edges of the incision, so that when the sheep reaches for the salt the pine tar will get on its nose.

All this I learned after losing 40 ewes in one year. It was costly at the time, but I learned something which will prevent further large losses.

After the lambs are on pasture they get no grain as a regular feed. I hold them over, and use them to clean up the corn-field over which the hogs have rumaged.

These are my methods of feeding and managing live stock. I believe one is very essential to the other. Without management, feeding would be merely giving the live stock the feed. The management end of the business decides what feeds to use, and the amount. I have been a live-stock man all of my life, helping my father, who was a pioneer stockman, before I went into business for myself.

I love the feeding business; but at the same time regard it as a business, just the same as I would if I were manufacturing any other article from the raw material. It is a business, and I apply business principles to it.



Westclox

HERE they are; the four top-notchers in the Westclox line. Big Ben heads the family. He's a good, substantial timekeeper and a loyal call-clock.

At his right, America: trim, alert, competent. Then Sleep-Meter, a close second to Big Ben; refined, neighborly, watchful.

Last but not least only in size comes little brother, Baby Ben, who tucks cozily into places where Big Ben might feel out of place.

They're all faithful timekeepers and punctual alarms. They all have that same good Westclox construction. They all wear our quality-pledge, Westclox.

Western Clock Co. - makers of Westclox

La Salle & Peru, Illinois, U. S. A.

Clip in the Spring

Treat your horses with consideration. You wouldn't do your spring work wearing your winter overcoat—don't make your horses work while burdened with the winter's clothing. Clip them. A Stewart machine costs only \$9.75 and lasts a lifetime. Send \$2.00 and pay balance on arrival. Or write for 1919 catalog showing complete line of clipping and shearing machines.

CHICAGO FLEXIBLE SHAFT COMPANY
Dept. A 140, 12th St. and Central Ave., Chicago, Ill.

BOOK ON DOG DISEASES And How to Feed

Mailed free to any address by the Author

H. CLAY GLOVER CO., Inc.,
118 West 31st Street, New York

Only \$2 DOWN and One Year To Pay

THINK of it! For only \$2 down you can now get any size of the New Butterfly Cream Separator direct from our factory on a plan whereby it will earn its own cost and more before you pay. You won't feel the cost. For only \$38 you can buy the No. 2½ Junior. A light running, easy cleaning, close skimming, durable, guaranteed separator. Skims 120 quarts per hour. We also make four other sizes of the

NEW BUTTERFLY

up to our big 800 pound capacity machine shown here—all sold at similar low prices and on our liberal terms of only \$2 down and a year to pay. Every machine guaranteed a lifetime against defects in material and workmanship.

30 DAYS' FREE TRIAL

You can have 30 days' FREE trial and see for yourself how easily one of these splendid machines will earn its own cost and more before you pay. Try it alongside of any separator you wish. Keep it if pleased. If not you can return it at our expense and we will refund your \$2 deposit and pay the freight charges both ways. You won't be out one penny. You take no risk. Postal brings Free Catalog Folder and direct-from-factory offer. Buy direct and save money. Write today.

ALBAUGH-DOVER COMPANY, 2139 Marshall Blvd., Chicago, Ill.



Opens Like a Book

Easy To Clean Easy To Turn

Frictionless Ball Bearings

Bearings Always Bathed in Oil

Over 150,000 new Butterfly Separators now in use.

Economy King Cream Separators

on Easy Payments

And by easy payments we mean just this:

We will ship you an Economy King Cream Separator in the table size on receipt of only \$3.00. The balance to be paid in easy payments of only \$3.00 a month.

Or, we will ship you any dairy size cream separator on receipt of only \$5.00, and you can pay the balance at the rate of \$5.00 a month.

We have other terms by which you needn't pay a penny down, but can pay all on November 1, 1919.

No matter which terms you choose there will be no notes to sign—no interest to pay. Just fill out the order blank enclosed in our catalog.

The Economy King, on our liberal payment plan, is a good investment, even if you have only two cows to milk, because it will actually earn the monthly payments with the cream it saves over the old separating methods.

The Economy King Is a Quality Machine.

The Economy King is a close skimmer. It takes the cream right down to the last drop from milk at any temperature and in any condition that it can be skimmed. It cleanses and aerates the cream and skim milk. It removes all foreign substances.

The Economy King runs easily and quietly. It has a sanitary bowl. It is easily cleaned. The supply tank is low so it can be easily filled. The Economy King is equipped with our new oil splash system of lubrication, by which all bearings run in a constant bath of oil.

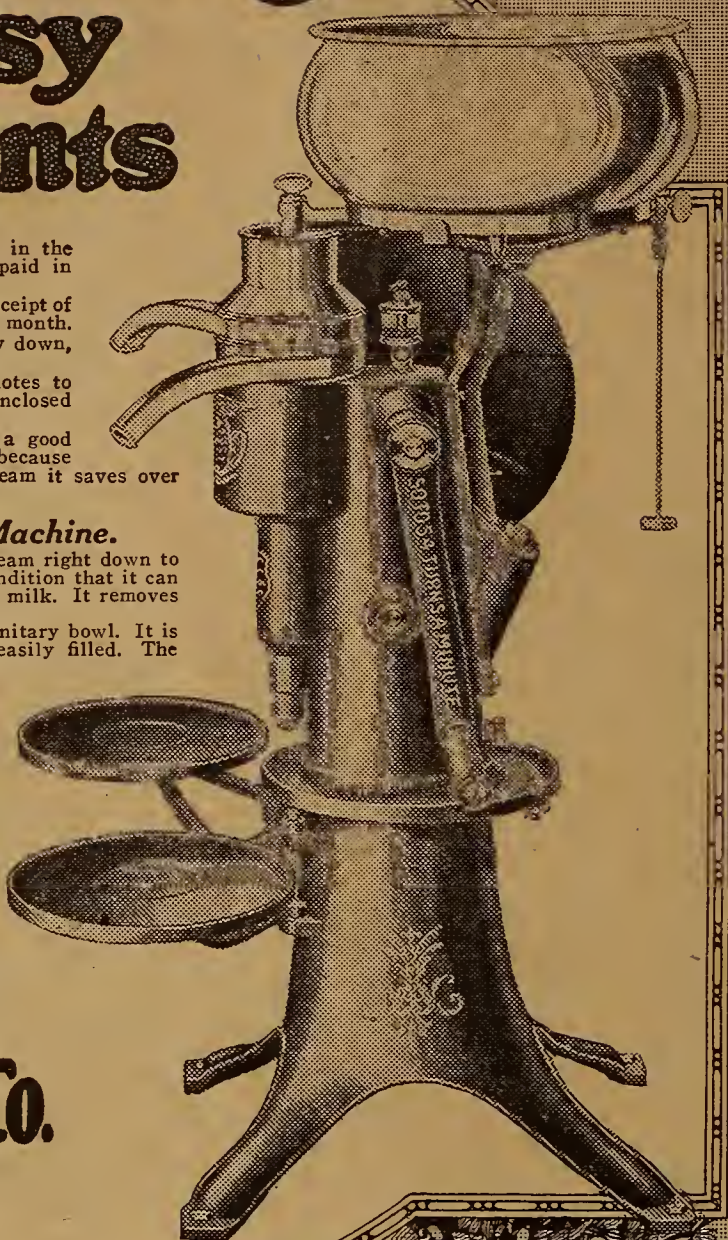
Over 600,000 Users.

Over 600,000 farmers have bought Economy Separators. Every one sold on ten weeks' trial. In producing Economy King Separators in our own splendidly equipped factory we give you the benefit of all the experience gained in the sale of this immense quantity of separators.

Send for Cream Separator Catalog.

Our new catalog contains all the information you should have before buying a separator. It quotes low prices and carefully explains our liberal terms which make it so easy to own the Economy King. If you haven't received a copy, just drop us a post card and ask for Cream Separator Catalog, whether you expect to buy a machine now or later.

Sears, Roebuck and Co.
Chicago, Ill.



That Farm Catalogue

By J. T. Raymond

A HOLSTEIN breeder whose annual sales reached \$25,000 in three years, a man whose unusual success is the wonder of his contemporaries, recently issued a "Book of Bulls" which reveals one of the secrets—namely, good salesmanship. This catalogue, descriptive of his herd, is undoubtedly the most complete and best ever published in his territory. Well illustrated, and giving in unusual detail the breeding and records of each individual cow, and the ancestry and qualifications of his bulls, this catalogue goes still further, taking a step which, though obvious to a good salesman, is overlooked by most breeders with stock to sell.

"This farm has first-class stuff," the catalogue says. "Now we'll show you why you ought to buy it."

The catalogue not only convinces the reader that the farm has good stock, fairly priced—it persuades him that pure-bred stock will pay him, which is often where the selling battle must be fought. The average farm catalogue does not do this. It attempts to show, more or less convincingly, that the breeder has good stock for sale; and lets it go at that—a very serious mistake.

In this catalogue the breeder tries, for example, to create a demand for his young bulls. Here are some of the things he says—not at great length, but with the "punch":

"You can always sell your bull calves if you own the right kind of sire.

"The better bred sire you own, the better bred and higher priced will be his offspring.

"You do not know how good a bull is if you do not know the official records back of him.

"It is quality that counts. Grow along quality lines.

"Club with your neighbors and buy a good bull, dividing the cost. Increase your profits by improving your herds, making a demand.

"Remember, the bull is more than half the herd. One poor cow means one poor calf a year. One poor bull means all poor calves.

"Do not be satisfied with just pure-breds. Test them, and be sure your sire is better than your females. Grade up, not down—but be sure."

Descriptions of 30-pound cows have no more legitimate place in a live-stock catalogue than selling talk of this nature. There are other stock breeders whose success is attributable as much to such good salesmanship as to good herd management, but their number is still small.

Also Applies to Poultry

In the poultry industry are several outstanding successes won with the combination of good stock and a persuasive catalogue. These men, typical of whose rise is that of a certain White Leghorn breeder, get away from stereotyped price lists, catalogue of winnings, etc., with elaborately illustrated booklets in which they tell in detail of their own success with poultry and the methods they use, and draw a persuasive picture of what others can do. They print letters, giving customers' experience in detail, by the score. Nothing of the hackneyed is found in their selling literature, and they sell the goods. The White Leghorn breeder alluded to, whose bulky catalogues, printed on first-grade paper, actually cost 14 cents each, has made as much as \$10,000 in a year.

There is a nationally known Ancona breeder whose sales last year were close to \$30,000. The success of neither of these men would have been possible without good stock, but excellent salesmanship was the factor which built up their large enterprises. It is significant that both of them, as well as the Holstein breeder first mentioned, came to the farm from businesses in which they had had valuable selling experience. One man had owned a piano store; another had been a leather goods salesman; the third had been a successful life-insurance man.

The important point is that there is wide-spread opportunity in live-stock breeding and poultry circles, and to a lesser extent in other lines of agriculture, for the application of selling practices now employed universally in the business world.

The catalogue is in its infancy as a selling weapon for farmers. That man has traveled a goodly way toward success who realizes it is not sufficient merely to indicate the merit of the live stock or products he has for sale. He must show the prospect why it will profit him to buy the article.



Are You in Love With Your Job?

Bruce Barton says: "If you can't fall in love with your job, for goodness sake, change it!" If you're not happy in your present work; if you're not enthusiastic about it—quit it! You're a square peg in a round hole. You're wasting your time and your employer's money.

Here's an Outdoor Job

Many an outdoor man has an indoor job, and the combination isn't a happy one. If you want to be outdoors—to be independent—to draw a salary of from \$35 to to \$50 weekly—clip the coupon in the corner and send it to-day. It costs you a postage stamp to investigate. Opportunity knocks! Write

Country Sales Manager
FARM AND FIRESIDE Springfield, Ohio

Country Sales Manager,
FARM AND FIRESIDE, Springfield, Ohio.

I'd like to fall in love with a job that will pay me a weekly salary of from \$35 to \$50. Please tell me about it.

Name.....

Post Office.....

State.....

Study Your Tractor's Habits

— By Earl Roberts

I PERSONALLY know several farmers who have purchased tractors recently and, after being a tractor owner for a few months, have practically condemned their machines. They don't seem to find any fault with other farmers' tractors, but they feel particularly ill toward the one they own. And as a tractor owner and user for the last twelve months I would like to mention some of the things that I have had to deal with, because the same things apply in large measure to all tractors. But the most that I want to do is to help some dissatisfied tractor user to become more familiar with and learn to like his tractor.

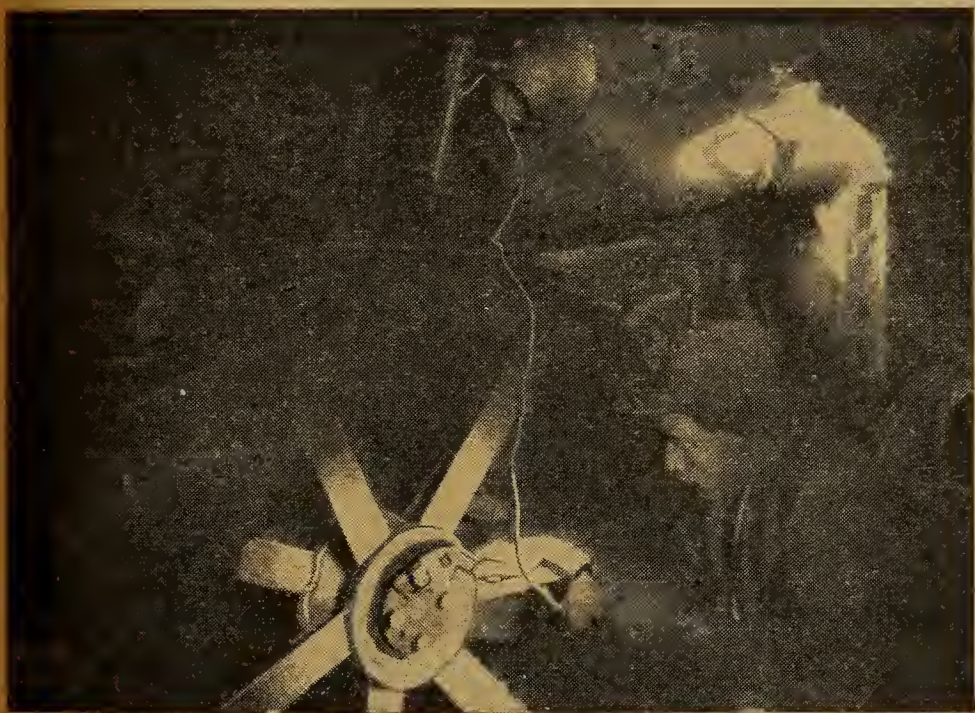
I feel that I rather had an advantage when the season opened up last spring, for I had bought the tractor in December, and during the winter I "buzzed" some wood, and when the ice season commenced I pulled the wagons off the ice on to the bank. In this way I became familiar with some of the things it would or would not do under certain conditions. However, I found starting the motor to be a very difficult matter in real cold weather. But after taking out the plugs and heating them hot enough to sizz, and then pouring in about five gallons of warm water, I got plenty of action. Where you prime with gasoline it's a good plan to warm the gaso-

scant. You must find that happy medium of just enough, for it is at this point your engine does its best. Most tractors have a fuel screen to catch the dirt that is bound to get in, and if you don't clean it once in a while it will bother you. Sometimes your pipe line gets to leaking and the fuel pump does not draw good, causing unsteady running. Sometimes, in priming previous to starting, enough gasoline will collect on the terminals of your plugs to short-circuit, and prevent firing. This must be wiped off or you'll never start.

Never take spark plugs apart except in extreme necessity. Screw them in tight enough not to leak, and not too far down, or they will burn in and you'll ruin them in getting them out. Nine times out of ten it's these little things that make trouble.

Persistent misfiring is invariably due to a bad plug, and in this case test out the bad one, and replace. Also, the same thing will happen with loose connections and water in the fuel tank.

The most prevalent misconception that a great many tractor owners have is in regard to the horsepower of their engine. Take an engine rated at 10-horsepower draw-bar pull, and they think it will pull as much as 10 good-sized drafters. But the fact is that ten ordinary draft horses



Electric lights take the trouble out of night work

line in some hot water, as it is much more sensitive. I have never had any trouble in starting in the severest weather when following this plan, all other conditions being right.

It makes no difference what kind of trouble you have, if it is persistent enough it aggravates and eventually totally disgusts the operator. And right here I wish to make mention of two things on each of which I spent a half-day before I learned what was the real trouble. And both happened this fall after I had used my tractor for nine months, and I thought that was long enough experience so I couldn't be fooled.

I went out to plow one morning, and after filling up on fuel and lubricating oil and screwing down the hard oilers I proceeded to start. I was still trying to start when noon came. I went to dinner pretty much disgusted, because I had lost half a day of good plowing. A heavy rain the night before had thinned my gasoline down too much, and there was simply nothing doing. A fresh supply after dinner started right off.

Another time I spent a half-day in trying to start, and I went over the engine from one end to the other; took out the plug and tested for a spark, and found that it was strong. The gasoline was right, because it had not been exposed to water. I finally concluded I had no spark again, and upon examination I found the magneto had stuck some place on the inside and was on a strike. I dropped in a little oil and it went to work.

I have seen tractors enveloped in such a fog of black smoke that you could hardly see them. Too much fuel means sluggish action and lost power, the same as too

will, if put to the test, pull your tractor backward on low without much trouble. But the tractor will on an all-day run, one day with another, do what your ten horses do, and a little bit more. So if you attempt to put all the load behind it that it would take ten horses to move a certain distance, then you have a serious overload. We know how long the average horse will last when he is pulling all he possibly can all the time. The same thing applies to machinery. Overloading causes unnecessary wear on bearings, and strains your motor so that its active life will be greatly shortened. You are overloaded when your motor does not maintain its normal speed.

The fall is the time to plow with tractors, but if this can't be done don't get scared in the spring for fear the ground will always be soft. When it is in condition to go on it with horses, then it is fit for tractor plowing, because the average light farm tractor has wheels broad enough so that they exert no more pressure on the ground in proportion to their weight than does a horse's hoof. And another thing: If you are afraid you'll be late, the tractor asks no rest if you have plenty of fuel and oil. Most horses at good solid work can only stand ten hours.

I see such ads as the following in the farm papers now and then: "For Sale—A good farm tractor, only been used a short time. Reason for selling, have no more use for it."

Once in a while such ads are very true, but I know a great many cases where the owner is completely dissatisfied. This should not be the case if he really has a good tractor, unless the owner never learned to operate it successfully.



ROOFINGS

Select the one you need

There are two kinds of roofing buyers; the unwise one, who is governed by price alone, thinking that cheapness is economy; and the wise one who selects his roofing according to the purpose for which it is to be used—buying the highest grades for his houses and barns and less expensive grades for his smaller buildings.

No single brand of roofing can economically be used to roof all your buildings. That is why S-P-C Roofings are manufactured in different grades—at different prices. They are made to meet all your roofing needs.

When you buy roofing, make your selection from

S-P-C Roofings

The five different brands of S-P-C Roofings are Imp, Cronolite, Zylex, Starex, Slatex (slate surfaced individual or strip shingles and roll roofing). They are made by The Standard Paint Company, the pioneer manufacturer of ready-roofings. The experience gained through more than a quarter century in the manufacture of ready roofing is back of every roll. Every one of the S-P-C Brands is the best roofing that can be bought at the price.

Look for the circle trade-mark—it is a good guide to follow when looking for ready roofing.

THE STANDARD PAINT COMPANY

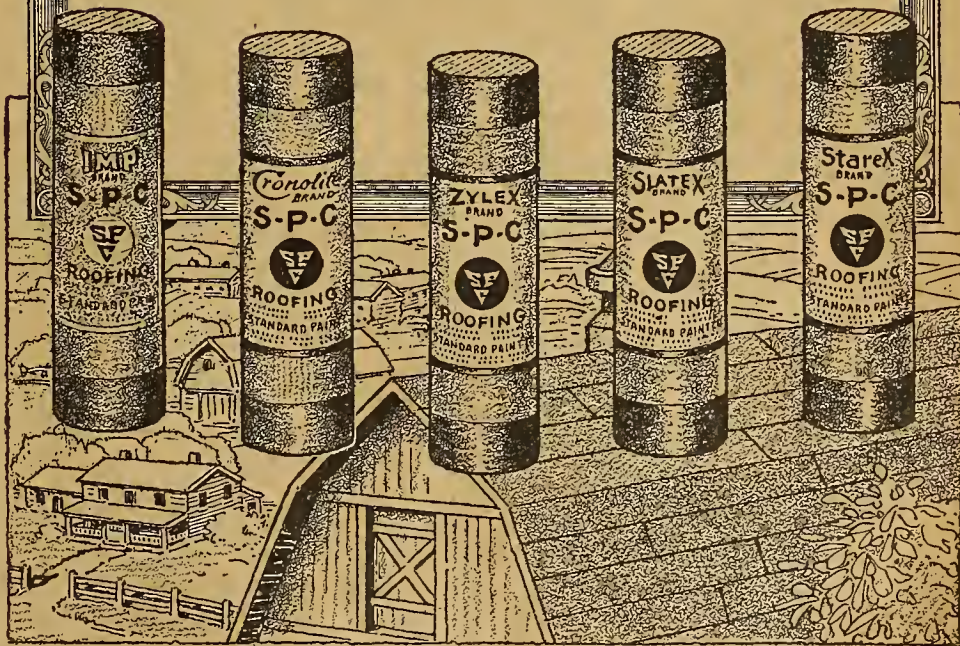
Chicago

New York

Boston

Makers of

RU-BER-OLD ROOFING





Stifel's Indigo Cloth

Standard for over 75 years

REGISTERED

For Men's Overalls, Jumpers, Uniforms

Miss Stifel Indigo Cloth — for women's overalls and work clothes

The strangest, fast color, work-garment cloth made.

J. L. STIFEL & SONS

Wheeling, W. Va. 100 Church St., N. Y.

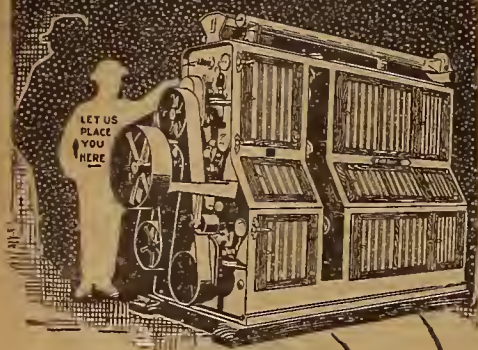
Garments made of Stifel Indigo sold by dealers everywhere

Look for the boot trade-mark on the back of the cloth, inside the garments before you buy.

We are Manufacturers of the cloth only

Earn Big Money

With This One Man Flour Mill



You can do it with the self-contained roller flour mill, the

AMERICAN "MIDGET" MARVEL MILL

The surest and most profitable business, second in dignity only to banking. Anyone, without previous milling experience, can operate it successfully.

"I made a success right from the start without previous milling experience," says a Georgia miller, while a North Dakota miller says: "I am no miller, just a common plug, but I am getting along all right with my 'Midget'."

You can start in this profitable business at once with our nationally advertised brand of flour—

"FLAVO"

(America's Community)

Flour

We furnish you the sacks with this brand, and your name printed on them.

Grind "FLAVO" flour for your home people. They are demanding it, and you can sell them.

Our Service Department and our booklet, "Confidential Selling Plans" will establish you in this business and make you a success.

A Michigan miller says: "We thank you for your help in building up our business."

A miller in Texas says: "Your selling plans and Service Department are of the greatest benefit."

This wonderful mill is made in seven sizes 15 to 100 barrels capacities per day. Takes only a small amount of power and will last a lifetime. It gives highest yield of good flour per bushel of wheat.

This improved patented system of milling makes "A better barrel of flour cheaper," therefore gives you larger profits.

From North Dakota one customer says: "The first nine months I made over \$3,000 with my AMERICAN MARVEL MILL."

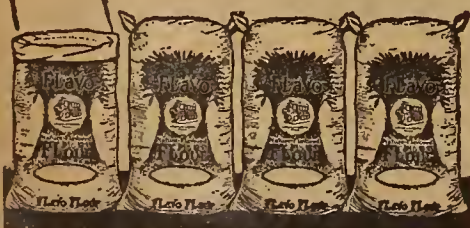
One from Kansas says: "I have not run a year full time but my books show \$3,000 profits."

While from Nebraska we have the following: "In the last three years our net profits from the operation of this mill have exceeded \$15,000."

This mill is sold on the strongest guarantee and thirty days' free trial.

Write today for our free booklet, "The Story of a Wonderful Flour Mill."

The Anglo-American Mill Co.
587-593 Trust Building
Owensboro, Ky.



The Four Secrets of My Farm Success

[CONTINUED FROM PAGE 20]

a good thing I sent my son over, because most of those horses weren't quality. But in the farming districts of Belgium he found excellent horses which he bought from the farmers. We were the second importers to bring over Belgians. The first trip was successful, but on the second trip all but three head died on the passage, because of an eighteen-day storm which rolled the boat and pounded the horses to death.

It was a big loss at the time, the horses being valued at about \$22,000, but for six or seven days the ship was supposed to be lost, and when I found that George had landed safely at Halifax I didn't mind it at all. I only worked harder, and made better arrangements for shipping the horses, with the result that since then very few have been lost. The following spring George went over again, and bought a few more horses with what money we could scrape together. If I hadn't loved the business I probably would have got out of it instead.

Two or three years after the first trip, we commenced importing Percherons and Coachers. From the beginning I was on the lookout for the kind of horse that would sell well. I wished to give the public what it wanted. So, when I saw an exhibition of four German Coachers at the local county fair, which a man from Watseka, Illinois, had brought from Germany, I thought them good sellers, and had George import them, with the result that for several years we sold them faster than we could import them. We have never been big breeders, but we have carried breeding horses almost exclusively—for one reason, because we didn't have to pay duty on them. Up to the time of the war George made from one to three trips across each year, or about seventy importations, bringing back Percherons, Shires, Hackneys, Coachers, and Belgian draft horses. At one time as many as 148 horses came through the port of New York for us.

Our success in selling has been due to advertising. We have always believed in letting people know where we were and what we had to sell. A man can't do much business unless he advertises. At first we advertised in the country papers, where it didn't cost so much. Later we advertised

in fifty counties in various States. Then we used the stock journals of national circulation, and the bigger farm papers.

We've used from a fourth to a full page in certain publications for the last thirty years. It has meant an appropriation of thousands of dollars a year for advertising, but it has brought in the business. Along with that we had salesmen out over the United States and Canada selling horses—as many as seventy on the road at one time. The business grew so fast between 1900 and 1905 that we had to establish barns at various places over the country to be nearer the trade. Even earlier than that, in 1897 and 1898, we exported to our stables in Antwerp 3,600 head of commercial horses which were sold throughout the principal countries of Europe.

Being careful, judging horses expertly, and buying the kind in Europe that Americans wanted, resulted in such a large business in 1903-05 that, with only a small profit on each horse, we made as high as \$100,000 a year in net profits. According to quality, our prices haven't been as high as those of other firms, although we have sold more high-priced horses than any other firm.

We sold W. H. Minor of Heart's Delight Farm \$170,000 worth of horses. At one time he bought eleven horses in twenty minutes. Having just half an hour between trains, he went out to the farm, saw the horses we had picked for him, but refused to take time to look over the pedigrees, saying, "Since I know you, never mind about the pedigrees," and rushed off to catch his train. Ten years ago we sold Mr. W. S. Corsa, a big farmer and breeder of Whitehall, Illinois, our Percheron stallion Carnot for \$10,000, the first of that kind ever sold in America at such a high price. Several years later we sold a gray Percheron stallion to Mr. Thomas G. Plant of Boston for \$12,500.

We can no longer be the largest importers of horses in the United States, because there are no horses in Europe for importation. Since 1914 we have received only six blooded horses. At the present we breed and sell American blooded horses almost exclusively, the largest part of the business being in drafters, although we own a few race horses, such as the champion pacing stallion William, the great

racing trotter Early Dreams, Wilgo, Captain Crouch, and several others which have each in turn stood at the head of his stud.

My son and I love all kinds of animals though the horse is our favorite, and since the war and the automobile slowed down the horse business we have turned to Hereford cattle and Hampshire hogs which we have sold in every State of the Union, and in South America and other foreign countries as well.

Always large exhibitors at fairs and expositions, both in the United States and Europe, we have shown repeatedly and won many prizes at Madison Square Brockton Fair, the Dairy and Horse Show, the world's fairs, and the International. Our six-horse team, which usually show on request and invariably receives a premium, is our most successful means of advertising. Eight years ago I commenced the team, consisting of large Percheron geldings bred and raised in the Middle States, weighing from 2,000 to 2,400 pounds, and hitched with expensive harness to a white wagon weighing 6,000 pounds, to demonstrate to farmers the high grade of horses they could raise if they would breed them properly.

My story sounds rather rosy in spite of itself, but there were times—a good many of them—when I might have given up the business altogether if my mind hadn't been made up so strongly to win out at the game. One of those times was about seventeen years ago, when 30 horses, most of them high-priced, died in one year. It was a streak of bad luck which most horse dealers have at least once; but I stuck.

Of course, I've reached the goal of my childish dreams, and passed it long since. You too, can win success at the game you love. Perhaps you already have. But whether you have or have not, remember this:

The one point which is too often overlooked by the successful is that success once won will not remain indefinitely unless you keep making the same struggle toward better quality which brought it. I take just as great an interest in keeping my business at a high standard of excellence to-day as I did in the first years of my work.

Three Raps on the Door

[CONTINUED FROM PAGE 54]

got to do is to look important and insist on seein' the manager. So pretty soon I've shouldered by the outside cheap help and am right next to Mr. Caskins himself.

If you ask me, I wouldn't buy a bone collar button of Mr. Caskins without testin' it to see if it wasn't made of bread crumbs. One of these droopy-eyed parties, he is, with a slow, snaky way of sizin' you up. Yet, I guess I played the come-on part well enough. Oh, yes; I was thinkin' of puttin' a few hundred into Radio Construction. I'd been tipped off by a good friend of mine back home that it was a sure-fire thing. But there was a few points I wanted to look up first. How soon did Mr. Caskins think they'd begin declarin' dividends? Could I see pictures of the factory? And how about the last semi-annual statement?

You see, I was playin' his cards for him. I nods my head enthusiastic when he points to a big framed photograph of the works. Course, it might have been a corset factory or a breakfast-food foundry, for all I knew.

"Could—could I see some of the shares?" I asked next.

"Why, certainly," says Mr. Caskins. "One moment, please. I'll get them myself."

As he steps out into the front office I slides over to the door that is half draped across with a big war map. It ought to be the door leadin' into the next suite—that is, the one that would lead in there if it wasn't locked. Which it was. And then I pulls the only brilliant play of the day. Just on a chance, I tries the commonest signal I knew.

"Rap—rap—rap."

I heard a swivel-chair pushed back, and a muffled step on the rug; then a safety catch is turned, and I'm starin' into the shifty eyes of H. Stuart Kinney.

"What the deuce!" he explodes.

"Just explorin'," says I. "I was wonderin' what reg'lar firm was back of this Star-Spangled bunch. Yours, eh?"

"Who says so?" he demands, flushin' up.

"I might if I was pushed," says I.

And then I turns, with a grin, to get the gaspy expression on the pasty face of Mr. Caskins, who's just comin' back.

"Why!" says Caskins, starin' goggle-eyed from one to the other of us. "I didn't mean, Mr. Kinney, to—"

"Caskins," says Kinney, "I would suggest, if your business is of a nature to attract amateur detectives, that you try to keep them on your side of the wall."

"Otherwise, Caskins," I adds, "people might suspect you was handlin' a side line for a perfectly respectable brokerage house."

"Bah!" says Kinney. "Your fool suspicions, young man, have no interest for me whatever."

"Ain't that just my luck!" says I, turnin' the grin on him. "Say, but I'm learnin' a lot from you to-day, Mr. Kinney. Thanks, Caskins; I ain't investin' just now. Maybe I'll call again."

And while the exitin' looks easy I slips past and out to the elevator, leavin' 'em glarin' at each other. Then I made a quick break for the Corrugated Trust, and inside of an hour Mr. Ellins had the whole story. But instead of grabbin' the phone, and callin' up the Secret Service people, he just puffs hard at his cigar.

"Yes," says he, after a while. "You've found the leak, Torch. But, unfortunately, it's one that can't be reached."

"You mean there ain't any way to stop peddlin' phony securities?" says I.

"Oh, yes," says he. "By bringin' civil actions, a year or more to a case. But by the time you have secured a decision your

defendants would be just about as easy to find as last winter's snowdrifts."

"Huh!" says I. "No wonder them baby bonds are being kicked off the doorstep, with all this opposition runnin' loose. Looks to me like some one ought to give Congress a hunch along that line."

"Quite right," says Old Hickory. "And who better than you? I think I can arrange it. We'll go to Washington Tuesday night. The committee will be interested in what you have to say."

"Meanwhile, though," says I, "the Kinney party does a rushin' trade through the back door."

"Ah, that is quite a different case," says Old Hickory. "I think Mr. Kinney will be called on to do a little explaining before the Stock Exchange board, and if any Star-Spangled Investment transactions can be traced to him—well, I wouldn't give much for his seat."

And say, by four-thirty that afternoon the offensive was on. We've had Kinney squirming and twistin' for two days now. He ain't half so cheery as he was. And ain't helpin' him any that Caskins should disappear so sudden.

Kinney may squeak through, or he may not. It looks stormy ahead. Anyway, I understand that's what they're sayin' out at the Country Club, where the tale is bein' handed around. And the other night, as I left to go on and put Congress wise, it was a toss-up whether they was goin' to let Kinney resign quiet from the club or give him the noisy chuck.

"Wasn't that the Mrs. Kinney who called on me?" asks Vee.

"Uh-huh?" says I.

"And then you happened to be the one who found out about him!" she goes on. "How odd!"

"Well, not so very," says I.

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FARM AND FIRESIDE

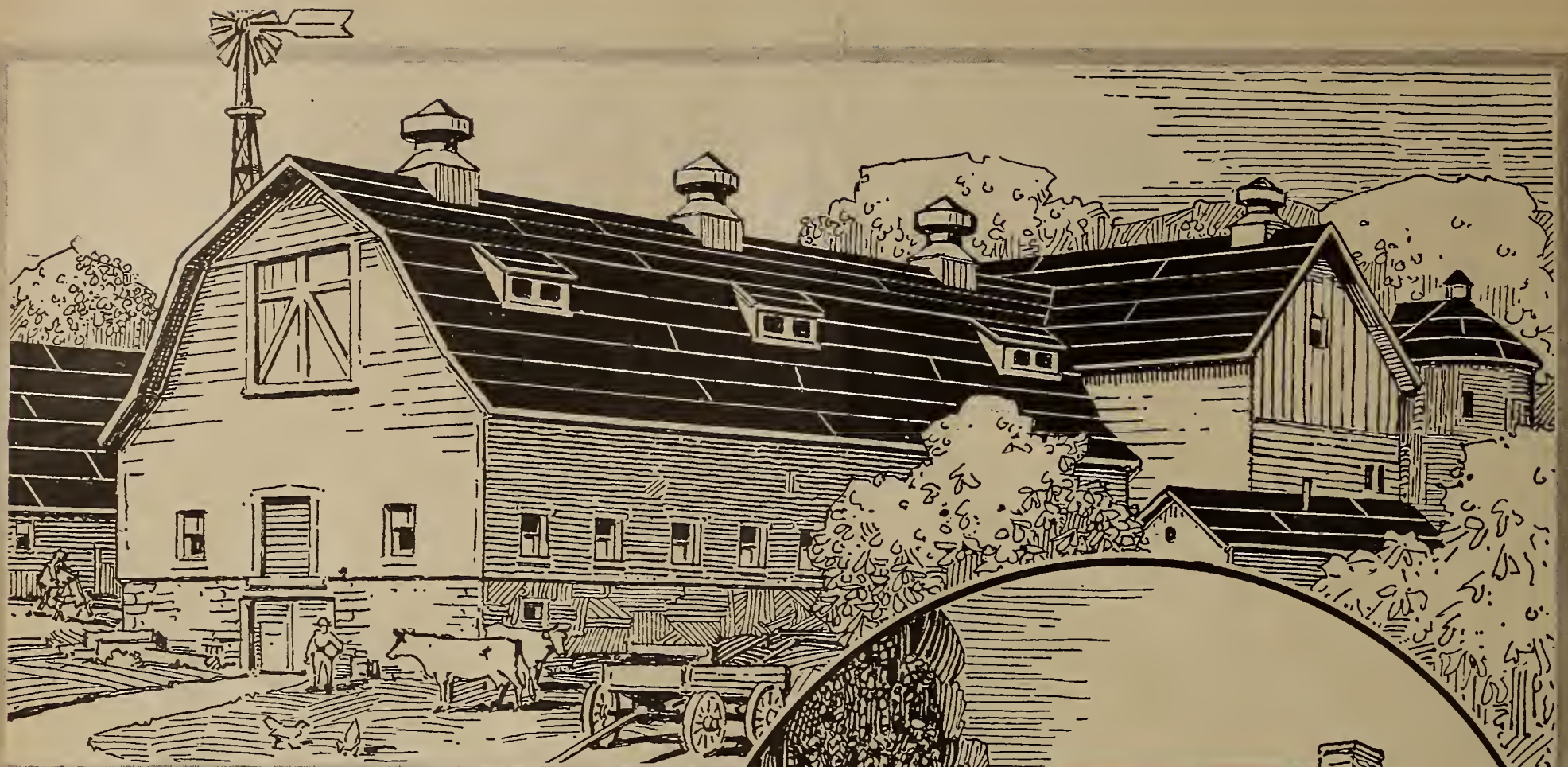
The National Farm Magazine

MAY 1919

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What About Farm Labor?—By William Harper Dean



Barrett Everlastic Roofings

EACH type of Everlastic Roofings is backed by The Barrett Company with 60 years' experience in the roofing business. All styles are sold by dealers everywhere.



Everlastic Multi-Shingles (4-in-1)



The newest thing in roofing—*four shingles in one*. Tough, elastic, durable. Made of high-grade water-proofing materials and surfaced with real crushed slate in soft art-shades of red or green. When laid, Multi-Shingles look exactly like individual shingles and make a roof worthy of your finest buildings. They are weather- and fire-resisting to a high degree. Fast color; need no painting. Being four shingles in one, they save a great deal of time in laying and require fewer nails.

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This is one of our most popular roofings. Thousands upon thousands of buildings all over the country are protected from wind and weather by Everlastic "Rubber" Roofing. It is tough, pliable, elastic and very durable, and the price is low. It is easy to lay, no skilled labor being required. Nails and cement are included in each roll. It is made of high-grade water-proofing materials, insuring dry, comfortable buildings under all weather conditions.

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The *Barrett* Company



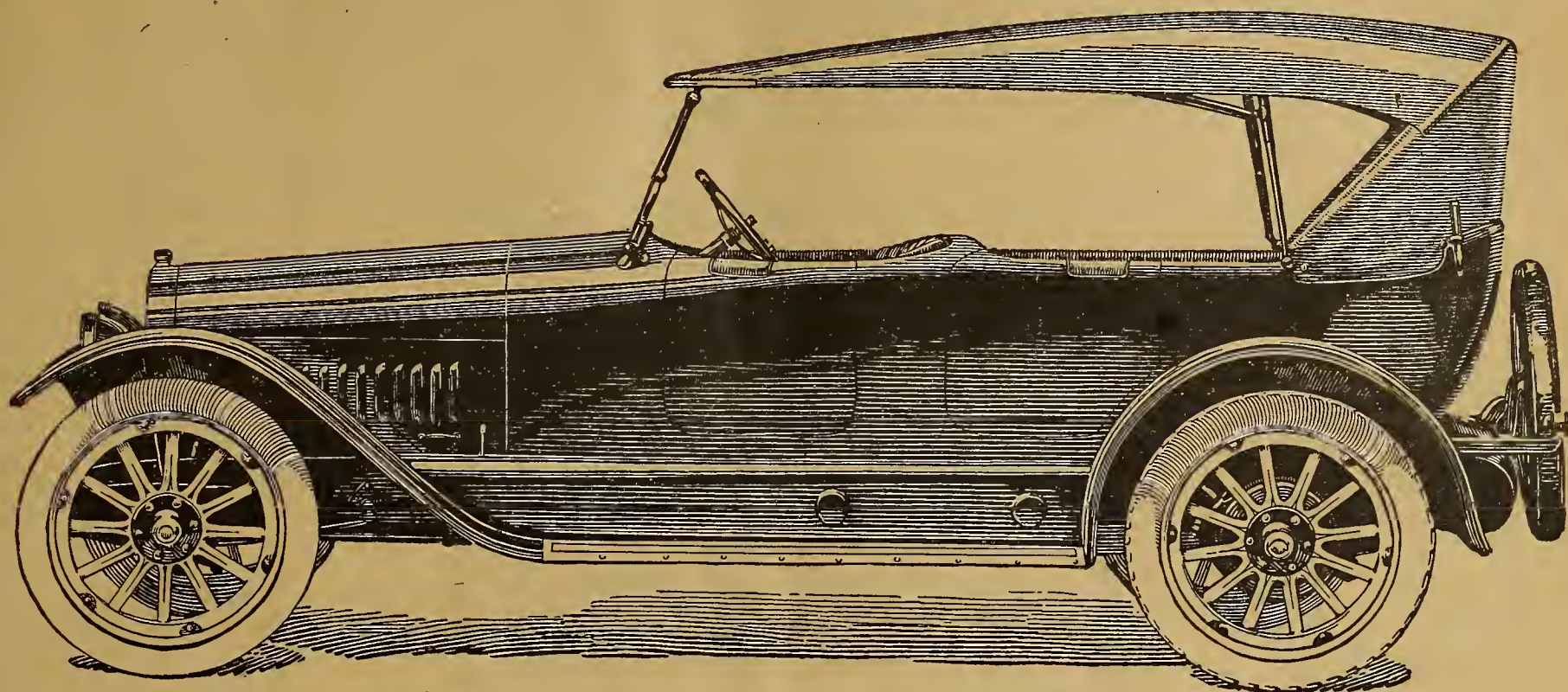
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THE BARRETT COMPANY, Limited: Montreal Toronto Winnipeg Vancouver
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New Mitchell Sixes

New Victory Model

Over 100 Improvements
50% More Strength



To Meet the Call For a More Enduring Six

Some years ago, when most cars were too heavy, there came a demand for Light Sixes.

There came a rivalry on lightness, and makers went too far. There came also a price rivalry, and the fierce competition led makers to skimp. The average Six was built too small, and quality standards were not high enough.

Years of experience have shown the mistake. Extreme lightness is not economical. A cramped car is not comfortable. Makers have found and users have found that such cars lacked endurance. Men want better cars in these days when cars are bought to keep.

The mistakes were natural, but ideas have changed. The great call now is for a sturdy car that lasts.

Here Is the New Idea

This new Mitchell shows the new idea. It is more than a new model—it marks a new epoch. Inside and outside it is based on new standards.

The changes are radical. Not in years has any new model of any type shown so many great advances.

There are more than 100 improvements. The average strength increase is 50 per cent. Endurance is increased 75 per cent.

Despite added weight, the operating cost

is reduced 25 per cent. Comfort and beauty are increased 20 per cent.

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This car was started two years ago. We employed many new specialists to help us create it. Soon after that the war came, and the great Mitchell factory went into truck building.

That gave these experts their great opportunity. During all those months they developed this car part by part. They studied every requirement and met it. They reviewed the records of tens of thousands of cars to learn the changes needed.

They spent \$250,000 for new machinery and equipment, for finer workmanship and more accurate tests. And they trained a staff of 135 inspectors to watch every detail, to analyze and test.

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This new Mitchell is built on the theory that cars cannot be too good. We have made it roomy—120-inch wheelbase.

There are new gears, a new frame, a new rear axle, a new crank shaft, to add 50 per cent to the strength. There is a new disc clutch. Brake efficiency is increased 75 per cent. There is a ball-bearing steering gear. There

are 123 drop forgings. There are rear springs which have never been broken.

There is a thermostat in the water system. The gasoline is completely vaporized. These, with motor changes, save 25 per cent on fuel.

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Write us for complete description, or let your Mitchell dealer show all the changes to you.

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When you compare this car with others you'll expect a costly car. You will see a hundred betterments, and many are expensive. But the price is lower than any car of like size, power and class.

The Mitchell plant has long been famous for its wonderful efficiency. All these new standards are paid for by that saving. We build the complete car—motor, chassis and body—under scientific methods.

Write us for all the facts.

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Five-Passenger. 120-Inch Wheelbase.

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Three-Passenger Roadster, same price.

New-Type Touring Sedan, \$2175.

Seven-Passenger Touring Car

127-Inch Wheelbase—48 Horsepower Motor

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(687)

MITCHELL MOTORS COMPANY, Inc., Racine, Wisconsin

WILLARD STORAGE BATTERY

Willard Threaded Rubber Insulation

Hasn't had a drop of acid solution in it or any moisture in either plates or insulation—

"BONE DRY!" When I say that about a Willard Battery with Threaded Rubber Insulation, I don't mean that the acid solution has been emptied out. I mean that there has *never been any solution put into it.*

With a Bone Dry Willard Battery there is not a bit of moisture in plates or insulation from the time the battery is completed at the factory until it is made ready for use on your car. You can get this absolute bone dryness *only* in the Willard Battery.

To both users and dealers Bone Dry means two things, both extremely important: First, greater certainty of getting a battery without waiting for factory shipment; and second, assurance of battery newness.

Willard Threaded Rubber Insulation, which is in every Bone Dry Willard Battery also protects battery plates after the battery has been put in service. There's ample proof of this in the record of 35,000 Willard Batteries (all with Threaded Rubber Insulation) put into service over three years ago; a large percentage of these batteries are in use to-day, supplying current as satisfactorily as ever.

There is the evidence—not what engineers say Willard Threaded Rubber Insulation ought to do, or what it could do in a well-cared-for battery, but what it actually has done.

Ask us to tell you more about Willard Threaded Rubber Insulation, also for a copy of the booklet "The Wick of the Willard."

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FARM AND FIRESIDE

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What About Farm Labor?

By William Harper Dean

FROM the Government itself to the migratory farmhand everybody's guessing about the farm-labor problems confronting the nation. And the migratory harvest hand's guess is as good as the Government's. Everybody wants to know whether there is going to be a flood of farm labor or a drought of it, whether farm wages can be lowered or will have to be raised, whether the cost of food and the prevailing wage scale of industry are going to seesaw or balance. We want to know, but we don't.

And why we don't and even why there is any tremendous farm-labor problem at all confronting the nation constitute texts upon which many a sermon could be written, and from which not a few morals could be drawn. However, we do know some things about the labor situation which might be interpreted as indicators showing the direction of the prevailing winds. And these things are well worth recording, because many men may draw their own conclusions by using them as a basis.

I have been to men who have been charged with the responsibility of doing what they could to stabilize the farm-labor situation, and they have told me what they know and listed the things they don't know. These men are in the Federal Department of Agriculture, which is perhaps the most accurately informed government agency dealing with farm-labor problems.

There is no side-stepping the fact that unemployment among the industrial classes is on the increase. The totals in and about the great manufacturing and industrial centers vary from week to week. To-day New York City may have 100,000 idle men, to-morrow the number may be cut in half. The pulse of a nation's industrial life is a jerky, erratic thing. But taken on the whole there is a steadily increasing labor surplus piling up throughout the country.

This, of course, reflects directly upon the farm-labor situation. Many well-informed government officials and men in private life predict that in the face of this condition there will be a dearth of farm labor. Common sense argues back no! There never has been a time in the history of this country when the labor-supply vacuum on the land was not filled from an oversupply in industry.

Again, a great deal of this industrial labor has been booked for a general exodus overseas to a number of fatherlands. As a matter of cold fact, at this writing there is every prospect of our losing between 2,000,000 and 3,000,000 emigrants in the immediate future. They are going to Russia, Germany, France, Italy, Hungary—don't forget there has been a world war, and there is no place so secluded that it has not been reached by war's bloody tentacles. These people want to know what has become of their relatives, what has become of their little investments "over there." And they're going to find out. Also, some of them figure that inasmuch as Europe now presents a colossal labor vacuum, chances there for good wages and steady employment are better than ever before.

Here, then, is a factor which must be reckoned with; surely it will tend to reduce the total American percentage of unemployment.

To offset this we have a tremendous army coming back to our shores. Both the Department of Agriculture and the

Department of Labor will, and are now, placing returned soldiers on the land whenever these are demobilized and select the land as a field for their future endeavors. How many returned soldiers will elect to return to farms or to go to them for the first time is a question which neither Secretary Lane nor you nor I can answer. Many

his labor problems there is one factor missing from the equation—the mental and moral stimulus bred by a war emergency. In other words, men who quit good jobs in shops and factories to work in the wheat fields when the fate of the world depended upon America's ability to defeat the submarine with wheat and meat in colossal



Stabilize labor by giving it steady employment. Farmers know that is the answer

of the returning men can't answer it for themselves.

All right, now comes along the bill in Congress which, if passed, will exclude immigrants from our shores for the period of four years. There is a lot of speculation as to the real motive behind this piece of legislation. It may be one solution of the burning Japanese immigration question—no discrimination against Japan, but against all foreign countries—Canada and Mexico excepted. Or it may be designed to protect this nation against a flood of surplus labor, so that we may quickly adjust the problem without having to deal with this disturbing factor.

And then it may be that Congress knows that Europe will discourage emigration of her desirables—and she will until she rights herself—and let the undesirables flock here—if we allow them.

One great point every farmer must keep clearly in mind is that in the solution of

quantities do not now feel the same patriotic enthusiasm. They feel that the crisis is past; there is a great let-down everywhere.

The Chamber of Commerce of Kansas City, Missouri, last year recruited 10,000 men in one week to save the wheat harvest. Men left their lathes and wages of \$5 and \$6 a day to harvest the crop at \$2 and \$3 a day. They would have thought you crazy or pro-German had you asked them why they did this.

But these same men to-day will not go to the fields at a sacrifice, simply because they do not feel that their country demands it.

Nebraska reports 11,500,000 acres of wheat to be harvested. She will need 136,000 men for this job. Will there be a sufficient amount of unemployed labor to make it certain that men will pay the Railroad Administration three cents a mile to be hauled to this work? Or will it be nec-

essary to put on special reduced rates at harvest time?

Neither you nor I know, nor does the Department of Agriculture, which, did it know, would at once tell the Railroad Administration.

But here's something definite, at least: Last year the Department of Agriculture saw that if it could have certain restrictions removed against immigration of negroes from the Bahama Islands the pressing labor problem in five counties of southern Florida could be solved. Accordingly, the Federal Office of Farm Management succeeded in getting Immigration Commissioner Caminetti to remove the illiteracy restriction against these negroes. They were brought in—some 800 or 1,000 of them. This year the Office of Farm Management has had to do the same thing again for Florida.

I mention this merely to make the point that whenever a definite problem has a definite solution clearly defined it usually is achieved by the federal agencies charged with this duty. But this is but an isolated case, it cuts no figure in the nation-wide problem.

We know that the army drafts took one million men away from our farms. These were not all farm laborers in the sense of day-wage men, but in addition overseers, owners, and the sons of overseers and managers. The machinery of our military draft worked smoothly and efficiently, but it was weak in design, particularly during the second draft, when men were required to either claim or waive exemption.

No patriotic farmer or farm laborer wanted to go to his draft board claiming exemption; he would have preferred stating his occupation and then leaving the question of exemption to the draft board. Because of this feeling our farm lost a million men through the draft, half a million left the farms for other industries where sky-high wages drew labor like a giant lodestone. Others left to volunteer and for other causes. A total of two million and a half men were taken from the land!

Some have returned, others will return shortly, but we don't know the figures covering the country as a whole. We know, for example, that of 19,000 men who left New York farms, 3,000 came back this last year. And so we know that something like a balance is being achieved, though this is necessarily by processes slow and irregular.

Now, there's a nice little patch of silver lining in this cloud. Never mind the gross lack of knowledge we have of what will happen to-morrow. In spite of all the losses in farm labor as a result of a multiplicity of causes, during the period in which we were actively engaged in war, our farms produced more than they ever had produced. They produced enough to feed America and the rest of the world—enough to have made a staggering surplus of food in pre-war periods.

How was it done? By getting down to brass tacks and putting food production on the same plane with the economic production of any other commodity. Labor-saving machinery—tractors, and the like—were bought in such quantities that it looked like plunging. Farmers and their wives and children went out in the fields and performed heroic work.

Fifty per cent of the farms in New York State last year hired no extra labor, nor tried to, for making up the deficiency. The farmers and their [CONTINUED ON PAGE 42]

Here's What You Would Do if You Were a Chinese Farmer

By Carleton W. Kendall

IF YOU were given one sixth of an acre of land, \$35 capital, a hoe, a rake, an oil can, and a little grass hut to live in, would you consider yourself equipped to be a successful farmer?

If you lived in Kwong Tung you would; and you would buy your clothes, your seed, and your daily bread (only you wouldn't eat bread) with the \$35, and use your oil can to cook in and water the cabbages with, and be as contented as can be—that is, if you were a Chinaman. If you had \$45 capital you could even employ a hired man for the season to help hoe the cabbages. And if you had another one-sixth acre of land you could get married and live happily ever after.

In China the unit of land measurement is the mou, and one mou, or less than one-sixth acre of land, is sufficient for the support of one farmer in the southern provinces. Thirteen mou, or two acres, will support a family of five, and if a man has forty-five mou, or seven acres—well, his neighbors all speak of him as the wealthy Mr. Fong, and of his wife as the fortunate Mrs. Fong, and of his children as the spoiled little Fongs, and he is asked to head all subscriptions and donate to the church. For in China the farms are not large, especially in southern China, the standard of the farmers is not high, wages are cheap, and the Chinese farmer and his wife can live comfortably on one or two acres of ground and a few dollars capital.

The size of the Chinese farms vary with the district, beginning in the south with little plots of one-sixth acre of land, and growing larger as you proceed northward, until, in Manchuria, there are even some farms of 500 acres. However, these large farms are usually worked by families, consisting of as many as two hundred members. Just imagine an American farm being worked by uncles, aunts, brothers, sisters, cousins, nephews, and nieces to the number of two hundred. Yet on these larger farms in northern China they all seem to get along together and divide up the profits satisfactorily, and a Chinese family fight is a rare occurrence.

Now, in China there is plenty of land still unutilized, and the reason for the farms being so small is not due to any lack of arable land, but because the farmers are scared to make them any bigger. This may sound funny, but it's true. In the northern portion of China and away from the coast the country is infested with robbers. A farmer who ventures into their domains usually gets his crop up and ready for harvesting, only to have it swept away in the night, himself and his family killed, and his farm devastated. For that reason thousands of acres of the richest lands in China are left unplowed. As the Government becomes better able to cope with the situation these lands will come under cultivation.

Another reason for the smallness of the farms is the transportation problem. In some of the northern parts of China it is said that 40 per cent of the people produce the goods, while it



A Chinese farmer and his family

Compare These Farmers: One is 250, the Other 4,000 Years Old

THE American farmer is 250 years old. His brother, the Chinese farmer, is 4,000 years old. No one can read what Mr. Kendall tells us about China's farmer without being astounded at the progress of the American farmer in two hundred and fifty years as compared with the Chinese farmer's progress, or the lack of it, in forty centuries. What's the answer? Simply this: America was born of the battles of men who would stand up and fight for better things. Our farmers carried that same spirit with them into agriculture. And if you measure the American farmer's progress by this amazing Chinese-American yardstick, the future looks good and bright for the American farmer.

THE EDITOR.

takes 60 per cent to get them to the markets.

Instead of taking his vegetables to the station and turning them over to the freight company to put aboard a fast express and rush to a market hundreds of miles away, like we do, the Chinese farmer has to depend on either wheelbarrows or canal boats for everything which is too heavy or bulky for a man to carry suspended from a carrying pole. In some cases he takes them to the market himself, so that all vegetables, fruits, and perishable crops have to be raised near the place where they are to be eaten. The principle vegetables he raises are sweet potatoes, yam, taro, cabbages, beans, cucumbers, pumpkins, squashes, watermelons, vegetable marrows, and brinjals. There are practically no fruit orchards in China. The Chinese farmer is very poor, with very little capital, and he cannot afford to wait the three or five years for apples, pears, prunes, peaches, or other similar fruit to ripen. He even excludes from his crops vegetables which take a long time to reach marketable maturity.

The Chinese farmer turns his investment over once or twice, or sometimes four or five times, a year. He seldom concentrates on one single crop, but raises three or four different kinds of things at the same time. For instance, if he plants wheat he usually sows it in furrows 18 inches apart, and then puts in a row or two of vegetables between the furrows. This gives him something to sell to tide him over until his wheat is ready for harvesting.

He seldom practices rotation of crops, but he is a great believer in fertilizers. One method he uses on his rice paddies along the river is to flood them with water from six inches to two feet in depth, hatch some small goslings, and turn them loose on the

surface of the water, stocking the pond with fish. The offal from the ducks furnishes food for the fish. He raises two crops of ducks, then drains the pond, sells the larger fish and plows the smaller ones into the soil, and plants his rice. The bodies of the small fish make an excellent fertilizer.

If he lives near a large city he buys bricks of night soil and mixes them with water and puts the resulting thick liquid on his plants. Sometimes he goes into the city himself and makes his own bricks. There are very few sewers in China, and most of the waste is gathered from house to house by men and boys. It is called night soil because it is generally carried at night. It is made into bricks by mixing it with clay and drying it in the sun. Sometimes he takes it direct to his farm in pails suspended from his carrying pole. It is said that from this source in one year the Chinese farmers have available 150,000 tons of phosphorus, 376,000 tons of potassium, and 1,158,000 tons of nitrogen.

Another kind of fertilizer he uses is peanuts and beans. Peanuts in China are called ground-nuts. The Chinese use a great deal of ground-nut and bean oil, and the refuse, after the oil is extracted, is mixed with earth

and made into cakes. These cakes are called bean cake and ground-nut cake, and the farmers say they make some of the best fertilizers they can get.

Whenever the Chinese farmer gathers his crop he is very particular to pick up all the straws and leaves, and these are saved and used around the roots of next year's plants. Other things he uses for fertilizers are: The sweepings from the streets; the hair from the barber shops; the refuse, paper, etc., from firecrackers after they have been exploded; lime and plaster from demolished buildings; soot; old bones; rice-straw ashes; mud from the rivers, canals, and his water tank; the refuse from fish and animals; tea leaves, and the refuse after extracting the grease from tallow and cabbage seeds. He seldom fertilizes at random, but usually puts in a handful of decayed fiber when he sets out his young plants, or digs a little ditch around the older ones and buries some bean cake or refuse from the table. He also uses liquid fertilizers to a great extent.

He irrigates extensively during the dry months, and sometimes he has to bring the water many miles. If he can't bring the water to his plants in ditches, he carries it in pails suspended from his carrying pole or set on either side of his monstrous wheelbarrow. The Chinaman, you know, invented the wheelbarrow, and no farmer there is prosperous without one.

He hardly ever uses a windmill or pump, but bails the water out by hand. Sometimes, when he is a carpenter as well as a farmer, he makes a trough, over which is a belt fitted with paddles. He attaches the belt to a crude windlass, puts one end of the trough in the water, turns the crank, and paddles the water up the trough into his ditch. His irrigating systems are very primitive. He often raises his vegetables in squares instead of long rows, and waters each square separately.

There are few pastures and meadows in China, and little chance for the farmer to keep stock. Most of his plowing and cultivating is done by hand. Occasionally he has an old moth-eaten water buffalo hitched to a crude wooden plow, but not often. A few mules are used, but horses are a rarity. He raises hogs, however, and takes them into the family circle to sleep with himself and his wife. He evidently believes that a pig in the parlor is worth two in the pasture, so he takes them in and makes them comfortable. It is the duty of the grandmother in the family to take the family pig out for exercise and generally to administer to his wants. When she takes him out for exercise she fastens a cord around his neck and leads him around like a prize poodle.

The Chinese farmer himself is a born philosopher. He takes life with Oriental calmness, and is really a wonderful character—hard-working and fearless. He knows all his plants separately, and loves each one. He is patient and industrious. His wants are few, and the simplest things of life give him pleasure. He is content with small profits, and he has little or no capital saved up ahead—not because he lacks foresight, but because the returns for which he will work for months are so small that only a few pennies of them remain after he has paid for his existence. His living expenses run [CONTINUED ON PAGE 37]



A Chinese farmhand



A Chinese device for drawing water from a pond into a rice field. It's pretty hard on feet

Could You Use Five Thousand Dollars?

Right in your neighborhood is a government man who will make you a long-time cash loan at a very low rate of interest

By Earle W. Gage

Secretary-Treasurer, Ashville (New York) National Farm Loan Association

AS SECRETARY-TREASURER of the National Farm Loan Association here at Ashville, New York, it has been my great pride to have been able through the Federal Farm Loan system to aid several farmers in securing adequate financial support to continue their business, not along the old haphazard lines, but with ample cash on hand to make a new and adequate start.

Take one farmer's experience with the system: He owns a 275-acre general farm, keeping a large dairy herd, a flock of sheep, and several brood cows, besides horses and the crops with which to feed them. He had an \$8,000 mortgage, with interest of 6 per cent, hanging over his head, and an annual interest payment of \$300, or a total annual payment of \$780.

At the time our national farm loan association was organized this man, though experienced and practical, had about made up his mind to quit farming. Through 1915, 1916, and 1917 he had faced discouragement from weather and market. He had been forced to go on bended knees before the goddess Money and ask for mercy in his payments every fall. He had been forced to sacrifice on the meat block cows never intended for anything but milk producers, cut wood and haul it six miles to market, sell hay that should have been fed to his herds and flocks—all to meet the payment on his mortgage.

He had been forced to go to the local banker and make and renew short-term notes to help meet these obligations, thus piling one woe on top of another. Yes, he had done all this, just as thousands of other farmers did. And he was getting mighty sick of it. And he looked forward with considerable delight to the time when he should sell out his holdings and live stock and equipment, quit farming, and get a job.

But when the loan was granted by the federal land bank this man thought differently. Down in his heart he wanted to stick to the soil. It had been his friend ever since he wore rompers. Now he has only to pay \$65 per \$1,000, or \$520 annually, and this is quite a load in bad seasons. He saves \$40 annually in interest, which he dedicated the first year to a new coat of paint for his house.

This man has discovered that the men back of the Federal Farm Loan system are friends of his; that they wish him every success, and are willing to do everything in their power to help him. None of the former Shylock brow-beating, and since he need not worry too much from year's end to year's end about meeting his payments, he is able to put more thought and energy into his work, and he is moving toward prosperity.

There are no two ways about it—a man can't do one thing when he's worrying about another. You can't farm efficiently if you have money troubles on your mind. Nor can you do good farming if you haven't the capital to equip yourself properly.

I know the Federal Farm Loan system is pretty well understood among us farm folks, but I am putting it forward again in the hope that it may help some fellow farmers to a solution of a pressing money problem.

Perhaps you are now up against about the same proposition as the man whose experience I have just told. If there is a farm loan association in your community, you can join it and get money from the Government. If there is not, you and nine of your neighbors can club together and form one. I will tell you how, and if what I say is not clear write to the Editor of FARM AND FIRESIDE, 381 Fourth Avenue, New York City, and he will see that you get the complete detailed plan direct from the Farm Loan Board authorities in Washington.

The Federal Farm Loan system is organized into districts, the same as the Federal Reserve system, with twelve federal land banks, each serving a different territory. You live in one of those districts. The connecting link between the Federal Farm Loan Board of the United States Treasury Department and you, the

farmer, is the National Farm Loan Association, comprised of you farmers who transact your business through the land bank of your district.

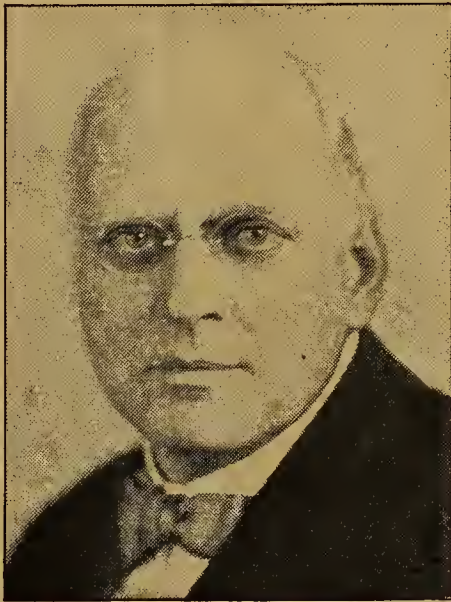
Your community may have a farm loan association by ten of you farmers making application to the federal land bank of your district for a total of \$20,000 in

land bank of the man seeking the loan.

The applications are then forwarded to the district land bank and referred to the federal land appraiser, who visits the property and makes a report on which is based the decision of the executive committee of the district land bank in granting, reducing, or rejecting the application.

And It's Mostly Thanks to Him

IT IS worth while to mention in this article that the man the American farmer has to thank, perhaps more than any other, for the establishment and smooth operation of the Federal Farm Loan system, is Herbert Quick, one-time Editor of FARM AND FIRESIDE, now member of the Federal Farm Loan Board. A man



Herbert Quick

who has the interests of his fellow farmers at heart more completely and more unselfishly than almost any other man in the country. A man who gave up a chance to make a big fortune to devote himself to this work for American farmers, which may overload him with love and respect but never will overload him with money.

loans, organizing yourselves into a board of directors, and subscribing to the capital stock of the land bank to the extent of \$10,000, each farmer's subscription being 5 per cent of the money borrowed, or \$5 per \$1,000.

The secretary-treasurer of your association is the only official among you who may hold office without being a borrowing member. And be sure to get an efficient secretary, because it is upon the secretary-treasurer that the successful operation of your association depends. For, no matter how capable the district officials may be, without a good secretary it will be difficult to spread the gospel and register many converts in your locality. The president of a certain land bank recently termed the live secretary-treasurer as the key log of the whole system, and this is becoming generally recognized.

You members appoint three of your number to act as a loan committee. It is the duty of these men to visit all farms for which a loan application has been filed with the association, and to report regarding the merits of the property, the character of the farmer, and the general facts of the case. The board of directors meets the second Tuesday of each month, and votes upon the various applications, this being your endorsement to the

This appraiser is the eyes of the district land bank, and it is important that he, first, be friendly to agriculture, so he can give a fair decision in favor of the farmer; and, second, that he himself be a practical, experienced farmer, so he can decide with justice regarding the merits of the individual case.

Experience is demonstrating the need of cutting even the very little red tape that

was placed in the system at the start. Although the framers of the act did an excellent job, time shows that the loan committee should be eliminated from the system, and only one capable man sent out to investigate the farms, reporting to the directors his findings. It is becoming increasingly difficult to secure the time of three farmers for certain days during the rush season, and again at the monthly directors' meetings, where they should certainly appear to discuss the various sides of the application for intelligent voting by the officials of the association.

You may borrow through this system upon your land to the extent of 50 per cent of your land's value. If your land has a reasonable land value of \$100 an acre, you could borrow \$50 per acre. You can also borrow to the extent of 20 per cent upon the value of your improvements or buildings. In our association

a man's payments are made in June and December, at the rate of \$65 per \$1,000 per year. This permits very easy payments at a season when our men have the ready cash, and the fall payment is late enough to permit members disposing of their surplus crops without suffering on the market.

Just a word as to the saving effected by farmers under this system in interest alone. There are, for illustration, \$100,000,000 in mortgages hanging over the farmers of New York State. If all of these were converted into federal farm loans the saving under the government plan would be about \$70,000,000 for the term of thirty-five years.

Instead of having a large indebtedness to meet at the maturity of your loan, and running the risk of foreclosure through hard times or failure of crops, you meet in installments your obligation and have no greater burden to bear at the end than at the start of your loan.

For instance, under the former system of loans the American farmer paid from \$600 to \$1,200 interest for a ten-year loan of \$1,000 at from 6 to 12 per cent, the range in interest rates, or a total of from \$1,600 to \$2,200 in all. Under the present system he would pay \$65 a year, or a total of \$650 in ten years, and be eating up the mortgage with each payment.

Thus, a long-term loan gives the advantage of compound interest to the debtor instead of the creditor. It enables you to pay your principal on the installment plan, so that the burden is scarcely felt. It is really a forced system of saving which, drop by drop, will wear away the disheartening rock of the farmer's indebtedness. It makes the farmer the master instead of the slave of his mortgage.

In short, the Federal Farm Loan system has stepped in between ruinous loans and the farmer, and assures all honest, experienced tillers of the soil financial support adequate to provide ready cash for their business.

To my mind, the vital need of the hour is to keep our experienced farmers on their farms, and when we have made agriculture profitable and agreeable they will gladly stay.

The Federal Farm Loan system is actually keeping farmers on their farms. The system was enacted just previous to our entrance into the world war, and proved the strong arm back of thousands of farmers at a time when industry and commerce attracted excess cash away from the farm. If the system was able to hold experienced men on the soil in the last three years, it will surely make the farm an attractive residence for you during the days of peace, though they be filled with many new problems, as were the war days.

The fact that \$300,000,000 has been placed in the farmer's hands, to support his industry, as you read these lines, though the system is as yet in swaddling clothes, bespeaks the popularity of it from the farmer's viewpoint. In a few months the system has eaten this \$300,000,000 hole in the American farmer's \$3,000,000,000 mortgage indebtedness, and the day is dawning when no mortgage will be held on a desirable farm property save a federal farm loan, because no corporation or individual can offer anything like it as a competing attraction.

In our community the Federal Farm Loan system is passing over the hills and through the dales like a forest fire, consuming the old mortgages and debts in one quick-burning flame, and firing our farmers with renewed energy and disposition to stick to the soil, for they now believe they have something big enough back of them to support them in their hours of need.

Co-operation is in no sense a new idea; but it is only since the organization of the dozen land banks and the nearly five thousand national farm loan associations, representing as many rural communities, that farmers have really been given the first nation-wide co-operative plan that has been a success.

Operated as it is, no matter if there is a money shortage in other financial circles, there will be none in the farmer's loan system. It will [CONTINUED ON PAGE 22]

Where is Your Land Bank?

District No. 1—Springfield, Massachusetts, serving the States of Maine, Massachusetts, Vermont, New Hampshire, Rhode Island, Connecticut, New Jersey, and New York.

District No. 2—Baltimore, Maryland, serving the States of Pennsylvania, West Virginia, Maryland, Delaware, Virginia, and District of Columbia.

District No. 3—Columbia, South Carolina, serving the States of North Carolina, South Carolina, Georgia, and Florida.

District No. 4—Louisville, Kentucky, serving the States of Indiana, Ohio, Kentucky, and Tennessee.

District No. 5—New Orleans, Louisiana, serving the States of Louisiana, Mississippi, and Alabama.

District No. 6—St. Louis, Missouri, serving the States of Illinois, Missouri, and Arkansas.

District No. 7—St. Paul, Minnesota, serving the States of North Dakota, Minnesota, Wisconsin, and Michigan.

District No. 8—Omaha, Nebraska, serving the States of Wyoming, Nebraska, South Dakota, and Iowa.

District No. 9—Wichita, Kansas, serving the States of New Mexico, Kansas, Colorado, and Oklahoma.

District No. 10—Houston, Texas, serving the State of Texas.

District No. 11—Berkeley, California, serving the States of California, Nevada, Utah, and Arizona.

District No. 12—Spokane, Washington, serving the States of Idaho, Washington, Montana, and Oregon.

These banks lend to farmers on first mortgages at a rate of 5½ per cent. If you desire to secure a federal farm loan, write a letter to the land bank of your territory, requesting name and address of your nearest national farm loan association. If none is organized, interest your neighbors in the system and start one. Or write to Farm and Fireside and we will put you in touch with the right people.

THE EDITOR.

How I Succeeded When Others Failed

With a list of things this farmer learned by hard experience which you can use in making money for yourself

By Roy Rawlings

IN TELLING this little story of how one young couple founded a home it is not with the intention of congratulating myself on my wonderful gifts, or to advertise my good fortune, but merely to suggest to other farmers and to some young fellows who may think there is no chance for them on the farm that Opportunity may be much nearer home than they think.

If things are not going very well, if you think you need a change, just study the situation. Don't be tied down by old habits and old ways of thought. Study your land to see what it can produce. Study your market to see what the people want. It is possible that you can make a great change for the better right where you are. You may find that for years Opportunity has been sitting on your doorstep.

It seems, as I look back, that whatever success Mrs. Rawlings and I may have is due to four basic things. Of these, perhaps the most important is that we have always refused to tackle any proposition that we did not fully understand.

As an instance of this, when we determined to quit the stage and return to the farm we had a big field to choose from, and many parts of it were more alluring than the part I knew best, which was corn-growing. We thought of California and oranges, of the Canadian Northwest and wheat, of this and that and the other thing, but we finally settled to corn, because we *knew* corn.

The second thing I learned was to base my actions on facts, never taking the opinion of a man, a body of men, or even of a community or a section of the country, without having investigated for myself. This habit of seeing for myself has opened up an opportunity for me that others were passing by every day.

The value of this habit was never demonstrated more forcibly than in the case of our present corn farm. It is located in a hitherto "run-down" and "worn-out" section of Rhode Island where everybody told us the soil was no good. Yet there is where we have made our success with corn.

Third, I have realized the value of being thoroughly married to my wife. I mean that her ideas, her thoughts, her plans are mixed up with mine to such an extent that it's hard to say which of us has contributed more to our mutual success and happiness. Personally, I think she has, but she thinks I have; and there you are. The point is that we are partners, growing up and going to grow old *together*, so that when we're eighty we won't be sitting at the dinner table glaring at each other. We'll have something in common.

Also, my wife was responsible for one discovery which saved our business from very rough days right at the start. Many a man ignores his wife's ideas because he's afraid of being henpecked.

The fourth thing that has been of value to me is that I am happy in my work. I know the true value and beauty of farm life because I have tried the other kind.

I know it is my niche, and as I am contented I don't waste any time thinking about other places, but devote all my energy to making a success of what I have, where I am.

And now for the story if you think it will interest you:

The most valuable part of my early

a time the tilling of the soil seemed mere drudgery, beneath my talents. The social life of the city attracted me, and I entered into it with zest. Also, I took part in the college theatrical performances, and that was my first step toward the stage.

If this were a novel I am writing, and not merely a plain statement, I might go into

time farmer boy were experiencing in real life the emotions of the drama, and, without the knowledge of the rest of the company, had become engaged.

We talked matters over and made our plans for the future. A few more years of the stage, always playing together of course, and when we had acquired sufficient capital we would marry and establish a home. I would go into business that did not require the constant shifting from place to place.

We had discussed our problems, and decided that with all its fascinations the stage life was not for us. Its rewards were substantial, there was no lack of interest, but on the other hand it seemed to lack substance. Like the stage houses which were mere shells, like the stage trees which struck no root in any soil, so the stage life seemed hollow and artificial. We were playing with life, so we agreed in our confidential talks, saying words that were not our own, laughing without mirth, shedding tears without sorrow.

Neither of us wanted that. So we decided to quit the stage, sometime; but events hurried us to a speedy decision. It was whispered about that the company was to disband. Then the rumor was confirmed. I was to tour with one company, Irene to enter another as leading lady, and it might be months or years before we could meet again.

We did the only sensible thing that could be done—made our exit from the world of make-believe, and with our marriage entered the world of real life once more.

What to do next? I thought of all the things I might attempt, but nothing drew me so strongly as life on the farm. By contrast with the stage it seemed so solid, so lasting, so full of serene happiness, and my wife, who knew but little of it, was charmed at the idea of a permanent home after the gypsy wanderings from city to city.

Of course, we had saved something, so we had a certain choice in placing ourselves. I *did* know corn, yet I did not want to return to the prairie.

Rhode Island, I knew, was good corn-raising country, famous for the quality of its yield and for the

excellence of the johnny-cake made therefrom. I had heard a good deal about the worked-out soil, but I had learned too much of soils to believe that they can be permanently worked out. The land was cheap, I knew; indeed, there were abandoned farmhouses going to decay and acres overgrown with brambles within a few hours' ride of the most densely populated cities of America. There, at the very door of the world's greatest market, were empty acres. To me it looked like Opportunity.

We spent happy days, my wife and I, traveling through that rugged little State of Rhode Island, charmed by the beauty of the wooded hills, the pastures bounded by stone fences, the quaint old farmhouses more than one hundred years old, the peaceful villages where the noise and hurry of modern life had never penetrated.

And there was a touch of melancholy in the old homes [CONTINUED ON PAGE 24]



"This is our wonderful old homestead as we found it, a tumble-down ruin. We have gradually restored it to its former dignity."

"At the right is my wife, without whom I never could have succeeded; and at the left am I with a few packages of the johnny-cake meal we make our money from."



It's Not How Deep You Plow, But How Deep You Think That Counts

SUCCESSFUL farming is not a question of how deep to plow, but of how deep to think. A pretty wise old tiller of the soil once said to us that a man was a fool to buy a single acre of land or a bit of stock or equipment until he knew exactly why he wanted it and what he was going to do with it when he got it. And, after all, success of any

kind usually simmers down to knowing what you want and why you want it. We can't know that unless we figure it out beforehand. The case of young Rawlings, who lives up near Wyoming, Rhode Island, merely proves again the importance of looking in before you step in, and of looking around when you get there. THE EDITOR.

education was gained on the farm. As a boy in Illinois, before I entered college, I studied one subject pretty thoroughly, and if degrees were given for that kind of learning I might have been entitled to one. My school was the prairie of the Middle West, the subject I studied was corn. At an age when other young fellows were matriculating with visions of an A. B. or M. A. in the future, I knew my subject, the selection of the seed, the proper time for plowing, the kind of soil required, the right way to plant, the cultivation that brings best results, and all the details that enter into the seemingly simple proposition of producing a good crop.

Then, like many other restless young fellows, I decided that the farm was not good enough for me, and set out to make my fortune and live a "fuller" life. I took a college course where I studied far different matters than scientific agriculture, and for

the details of how I was fascinated by the life of the stage, found a foothold in that precarious profession, and finally made good.

But it is enough to say that in a few years after leaving the farm I was playing the part of a young hero in many a thrilling drama.

At the height of my stage career I was playing opposite Miss Irene Gammell, leading lady in one of Wm. A. Brady's companies. The play was very successful, a Civil War story in which as a dashing young officer I made love to the charming heroine, and night after night wooed and won her in the glow of the footlights, while the public watched with sympathetic eyes.

Perhaps the theater-goers said, "How can those young people make love to each other without falling in love in good earnest?"

We couldn't.

Presently the leading lady and the one-

My Experience With Tractors

By Readers of Farm and Fireside

First Prize

Winner: Royal L. Kozel, Fairview Farm,
Marston, South Dakota

WE OWN a 10-20 tractor with which we are more than satisfied. This tractor has been in constant use during all of the spring, summer, and fall of 1918, and the only expense we have had, outside of fuel and oil, was \$1.25 for a broken push rod.

This last year we farmed 295 acres of land, doing all of the work with the tractor, with the exception of drilling and cultivating, which was done with horses.

Our first work with the tractor was plowing for oats, when we pulled a three-bottom plow and one section of harrow, thus doing two operations in one. The plowing was done at a depth of about six inches. The next job was disking for wheat. The tractor pulled two eight-foot disks, hitched in such a manner that the rear disk overlapped the front disk one half, thus double-disking the ground. During this time the hired man had been following with the drill, but when the disking of 100 acres was finished he was so far behind that I was obliged to hitch the tractor to another drill and help him finish up. The tractor could have easily pulled two drills; but as we were unable to obtain another at the time I went to work with one, and found that even then I could drill more acres a day than the man and team, although he was using the same size drill.

Our next job was disking for corn. During this operation the tractor pulled three disks—one eight-foot and two seven-foot disks. With this outfit I disked 75 acres in one and a quarter days. As one of our neighbors was at this time behind in his work, we hitched the tractor to the plows and plowed about 30 acres of ground for him. We then plowed 35 acres of our own ground for corn. The tractor pulled a three-bottom plow at an average depth of seven inches. Of course, a section of harrow was pulled at the same time, so the job was complete. The horses were then set to work pulling the planter over this ground, while a double-row lister was put behind the tractor, and the balance of 75 acres was planted in record time.

The engine now got a few weeks' rest while the horses were used to cultivate the corn. A little later the tractor was again on the job in connection with an eight-foot grader, and about a week was spent in roadwork in the vicinity. For this work we received \$2 an hour.

At harvest time the tractor pulled an eight-foot binder, with an eight-foot disk attached behind the binder in such manner that the bundles fell on newly disked ground. An attachment was made for the bundle carrier of the binder so that it could be handled from the tractor seat, and thus one man operated the entire outfit while the rest of the help was shocking.

After the harvest the tractor was hitched to a ten-foot tandem disk, and the ground was prepared for fall grain. We then plowed 25 acres for a neighbor, for which we received \$3 an acre.

The final work of the season for the tractor was pulling a double-cylinder corn sheller. With this outfit we shelled several thousand bushels of corn, for which we received four cents a bushel. The amount shelled varied from 500 to 1,000 bushels a day, depending upon the number of pulls and the condition of the corn.

I repeat that all of the above work was done with absolutely no trouble, the only repair expense being for one push rod. That is why we are highly satisfied with our tractor. During our spare time this winter we took the engine apart and cleaned out the small amount of carbon we found in the cylinders. We found the valves in excellent condition, and we also found that the bearings, with the exception of one or two, did not even need adjusting. Those that needed it were adjusted by taking out one or two of the thinnest shims. Of course, we had taken good care of it all along.

I fully agree with Mr. McClure in that tractor manufacturers should give more attention to their service and repair

departments, although we do not have trouble getting repairs such as he mentions, as we can telephone in the evening to the branch house at Aberdeen, South Dakota, where a full line of the repairs for our machine is carried, and the repairs will arrive the next day at noon.

Before purchasing the tractor we used ten head of work horses, but nearly always found ourselves behind with the work. We now use six head of horses, although we could get along very nicely with four. It is also our belief that a certain number of horses should be kept on every farm, although a motorized farm may be possible. We have sufficient motor equipment on our farm to take care of all the work with the exception of cultivating corn. Our equipment consists of a tractor to do the largest share of the work, a 1¾-horsepower stationary engine to pump water, run the washing machine, etc. (both of the above engines burn kerosene), a one-ton truck with which we

prospective tractor buyers in their selection of a tractor, and prove to them that tractors can be and are a success on farms of nearly any size. Also, that it may help some tractor owners to find some of the still undiscovered possibilities to be found in their machines.

Second Prize

Winner: J. L. Townsend, Stoughton,
Wisconsin

THE value of the steel horse can hardly be overestimated by any farmer who has more than 100 acres of plow land, or even less if he is willing to help out his neighbor and at the same time make some spending money for himself.

I purchased my first tractor two years ago. It was an 8-16 two-bottom tractor, and while it had all the power it was rated at, and was a very good tractor, I soon found it did not have power enough

Thanks for the Tractor Letters Keep Them Coming

YOU certainly came across with the tractor letters. Fine ones. Just what we wanted. We are using the prize winners here (it really was a toss-up as to who took first prize); and a lot of the others we're going to pay you for and print from time to time. You have told the facts straighter and better than anyone else could have told them, because you know from experience what you're talking about.

You will notice that we have omitted the names of the tractors mentioned in the letters. Our sense of fairness tells us not to print them. But we have the information on file here, and if any of you write in for the name of the tractor mentioned in a certain letter we will give it to you.

If any of you have had an interesting experience with tractors, and haven't yet written us about it, be sure to do so, because with the information in your letters we may be able to show the tractor makers how to give you better tractors and tractor service. And we always like to be of practical use to our readers in everything we do.

THE EDITOR.

do all of our hauling, and a touring car which we use for both pleasure and business.

In buying a tractor the prospective purchaser should study the conditions on the farm where the tractor is to be used, and then buy one that is powerful enough to meet his needs. In my estimation the 10-20 is the ideal size for the average farm. We could possibly get along with a smaller size, but of course it would make the work slower, as it would not pull more than two plows and would be absolutely unfit for such work as grading roads. We could also get along with a larger size, but it would hardly be practicable for some of the lighter jobs found on the farm, and, besides, its greater weight would be injurious to the soil. The 10-20 seems to strike the happy medium.

Never overload a tractor for any length of time, for it is very injurious to the tractor, and shortens its life as nothing else can do. Take off one plow or lighten the load in some similar manner, rather than pull the tractor to the limit of its power, as in the end both time and money will be saved.

There are many styles and types of tractors on the market for one to choose from. Above all, get a machine with a reliable company behind it. Always get one with more than one speed, for sometimes you will find yourself in a tight place, and then, by shifting into some lower gear, the tractor will get out easily and without any undue strain upon the frame or gears. Remember also that a tractor running at excessive speeds is not likely to last as long as one running at a lower speed. A tractor is at best a heavy machine, and does not have the means of absorbing jars as does an automobile. Put a tractor on a hard road or in a rough field and the jolting will soon jar the machine to pieces. And last, but not least, keep all the nuts and bolts tight.

I trust that this may, through the columns of your paper, help some of the

to be most efficient, and there were a great many times I wished it had just a little more, so when I got a good chance I sold it.

I then bought a 12-24 three-bottom tractor, which has proved very satisfactory and practical for my purpose, and right here I wish to say that it depends a great deal upon conditions of your farm and what you intend to use your tractor for to determine what type of tractor you should buy.

There is a great deal to be considered: First, what percentage of your work is to be plowing and general field work, and what percentage is to be belt work, and what is the size of your machines to be operated?

What percentage of your work is to be roadwork, or do you intend to do a great deal of custom work? If it is mostly for general farm work, then what is the nature of your farm? Is it hilly and very rolling, or is it level, or is a great deal of it very low land? All of these conditions should be very carefully gone over before you make your investment. Because one type of tractor works very much better on rough, rolling land than others, and if the greater percentage of your work is to be custom work, such as running a large thresher, you should get a tractor with considerably more power, say 18-36 or 25-50. But I believe the average farmer would be better satisfied with a tractor that will handle three plows efficiently under most conditions, say from 10-20 to 15-30 horsepower, 12-25 being the average. And I think one should be very careful and not purchase a tractor that is too heavy. More especially for field work, as it requires too much of the engine's power to propel the tractor itself through the loose ground, and there are a great many types where the weight is very nearly equally divided between the front wheels and the drive wheels. The front wheels neither push nor pull, but have to be forced ahead by the two drive wheels,

except where it is a four-wheel drive. For this reason I am very anxiously waiting for the four-wheel-drive tractors to come out, and I feel sure they will very soon be making their appearance.

In our work of reconstruction there is nothing that will do more than the steel horse. I have used mine for ditching, or what we call surface draining. By using a three-bottom plow and a small grader it is surprising how fast one can make a broad swale three or four feet deep in the center, and from two to four rods wide—one that will take off an enormous amount of surface water in a very short time. In this way there are acres running into millions that can and should be redeemed and made into the very best of tillable soil.

This in itself is very often worth more to the farmer than his tractor cost. For example, a farmer living near me had 100 rods of ditching to be done, and he had offered a dredging company \$2 a rod to do the work. I took the job at \$15 a day, and it only cost him 50 cents a rod, and he claimed he had a very much better ditch than the other, or V-shaped, ditch would ever be. He redeemed 20 acres of land worth \$200 an acre.

Then there is another very important thing to be considered which is very seldom thought of, and that is having a clear view ahead so you can readily see where you are going. There are a number of types that have this advantage, and there are a few where the driver has to sit in a strained position all the time, which becomes very tiresome.

Another equally important factor is to get a tractor that guides easily under most conditions. I have worked some tractors that kept me so busy all the time that an eight-hour day was enough for the average man. But a great many models have overcome this to a great extent.

The question of fuel has not given me much concern, although it is about the first question asked by the average person. Kerosene being the prevailing fuel, most all tractors have an efficient kerosene burner.

But *lubricating oil*, and a proper lubrication, is one of the most vital questions to be considered. It means everything to the tractor—*life, efficiency, and durability*. The lubricating system should be the very best.

I prefer the force-feed system, as it gives perfectly fresh oil to the vital parts of the engine all the time. Where the splash system is used the operator is very liable to neglect the changing of the oil, and it soon becomes thin and loses its lubricating qualities, which means a short life to the tractor—more especially when a high-tension or very high-speed motor is used, and for this same reason I prefer a lower-speed motor, say from 600 to 900 r. p. m., but if you get them lower than this you are apt to have excess baggage in balance wheels.

Like the coming of the automobile and the trucks, the birth of the tractor is the greatest blessing the horse ever had, and the blessing to the horse is a godsend to the driver, and will prove to be one of the great pillars of progress which not only the progressive farmer but also the city man should be interested in.

Third Prize

Winner: Howard L. Brantigam, Sidney,
Ohio

I HAVE lived on the farm all my life, but I have been farming for myself only five years. I have lived on a 160-acre farm since that time, and found it necessary to hire help from the beginning, which I did not like to do, although for three years I have had as good a hired man as one could ask for. I was not satisfied, as I always thought I could do everything, and do it a little better than he could. It did not only worry me, but it put extra work and worry on my wife. As we had two small children I decided she had all she could do to take care of the children and do the housework for ourselves, without doing extra washing and cooking, which has to be done when steady help is kept.

The next thought was a tractor. As I am only twenty-seven years old, and have several years of [CONTINUED ON PAGE 20]

A Father Who Gave His Boys a Chance

And the story of what the boys did with it. Is your son anxious to try his hand?
If he is, it might not be a bad idea for you to let him

By Thomas J. Delohery

IF YOU have a son who wants to take over the operation of your farm, and you are doubtful as to how youth will act under managerial burdens, read this story. If, on the other hand, you are impervious to the requests of your boy, do not turn over after you have finished. Instead, devote a little time and thought to this story, and figure out if your son can't do the same thing.

Youth, fired by a wonderful imagination, has lots of pride and ambition. This is a story of pride and ambition; of sedate age succumbing to impetuous youth; of the desire of two boys to have the best farm and herd of cattle in their county.

And after four years of hard and persistent work they have succeeded. Now they are after bigger game, and they'll get it too.

Four years ago the reason for this article came into being. At that time, Robert E. Augustine was twenty-seven years of age; his brother, Phil S. Augustine, had just turned twenty-one. They were helping their father to farm his land near Pound, Wisconsin, but were getting dissatisfied. The farm had been worked for a score of years, and was not producing as much as it might. The stock on the place was not the kind the boys had read about in farm magazines, nor as good as some on neighboring farms.

When the boys went to town on Saturday and talked shop with the rest of the young men their age, some other farmer was always the subject of the conversation. The good cattle or the big yields of the Augustine farm could not be talked of, because neither was a fact.

Jim Jones's cattle or the corn of Bob White was always the thing talked of. Some of the boys bragged about the things on their places, but the Augustines had nothing to talk about.

Naturally this hurt their pride; but at the same time it fired their ambition, and they hoped some day to have big yields, and fine stock, so that they could talk about their achievements.

"It surely was hard for us to come home and look at the stock on our farm, after hearing about the things other people had," said Robert Augustine. "I believe, however, that this sort of thing was the turning point in our lives. Both of us often talked over things while working in the fields or while milking our scrub cows.

"Finally we thought we had better start in if we were to realize our ambition—to build up the richest and highest producing farm in this county, and to have the highest producing and fastest developing herd of cows. So we asked Father if he would let us run the farm or sell it to us."

On November 1, 1914, they took their first step toward their goal. On that date they bought the farm on contract from their father. In less than four years they have reached their objectives, and are carrying on to greater achievements. Not only in their own opinion have they succeeded, but also in the opinion of every farmer and city resident living in Marinette County. Everyone knows the Augustine brothers and of their achievements. Moreover, they are not a bit backward in telling you.

Some time ago I was visiting Marinette, a short distance from Pound, where they live. My friend, whom I visited, drove me about the country. It is a cut-over section, and rough land is plentiful. One afternoon, after passing miles of this sort of land, we came upon a fine pasture, containing some



The Augustine boys. The young bull at the left is the herd sire. He was eight months old when this picture was taken

good-looking Holstein cows. Beyond the pasture was some grain that was showing good growth. Curious, I asked my friend who owned the farm and the cattle.

"That stuff," he replied, "is owned by the Augustine boys—everyone calls them boys. They have been breeding that herd up for about four years, and they surely have a good one. Moreover, they brought up their land too. It wasn't producing much, when they took it over from their father." He told me a few incidents of the struggle the Augustine brothers had made to realize their ambition.

Being interested, I had him stop, and we sought out Robert Augustine, the oldest of the brothers, who was working in the cattle barn. He told me the story of their work, and it was with pride he pointed out the best cattle in the herd.

He started by telling me of their ambition four years ago, and concluded our visit with, "Our aim in breeding is to build up a herd of about 50 head of the highest producing stock our money, time and brains can produce."

Notice how he said this work would be carried on with their own money and their

own brains. This pride and ambition, perhaps, are the big reason for their success in cows. Besides, both boys love the work—are born herdsmen. Neither of them had any particular training in dairying, yet they know the business.

"Our farm, when taken over," he said, "consisted of 200 acres, 84 of which were under cultivation, the rest in brush pasture. We have cleared up about 24 acres in four years, four of this for cultivation, and the other, being too rough for farming, was left in grass.

"We then had 10 scrub cows, 6 steers, a few calves, and 10 hogs. We learned the rudiments of dairying on those cows, and at the same time learned that they were not good enough. Brother and I did the milking, and I remember when we were sitting on the stools we talked about getting some good cows some day.

"After taking over the farm we borrowed \$1,500 from Father, and to this added \$500 which we had saved for this time. We bought four registered cows and a sire, together with five good grade cows."

"I suppose you wonder why we bought the grades when we were trying to get

pure-breds? Well, we didn't have enough money to buy a herd of pure-bred cows, and our income from four cows wouldn't be very much. We had to have money to carry on our operations, so that we could make more money and buy more cows. That's why we bought the grades. It wasn't for breeding, but for the milk.

"Another thing: We didn't know the business from A to Z, and figured it would be best to break in to the business gradually, and at the same time earn some money.

"While we were longing for the day we could start business for ourselves we were studying dairy books, reading farm magazines, and talking with other breeders when we had the chance. We wanted to learn all we could, and we are still students of the dairying and breeding

business. We always will be.

"We realized long before we started in that to learn from our own experience, without any help, would be too costly, and it would take some time; so we got all of the information we could from expert breeders and dairymen. This information, and the stuff we got from books, gave us a better insight into the business, and undoubtedly saved us much time and money. It pays to listen to the other fellow when he knows what he is talking about.

"The next year we bought three registered Holstein heifers, two of which, since that time, have made official butter records—that is, have produced better than 25 pounds in seven days as junior three-year-olds.

"And while we were laying in and breeding pure-bred stock we didn't sell all of our grade stuff; indeed, we disposed of our last grade cow on the first of May, this year."

He took me out into the pasture where the cows were grazing on a luxurious growth of clover. He had the pedigrees and production records of each cow on his finger tips.

We came upon a cow that looked the size of a dairy bull. He had the affront to ask me if I could see it.

"That cow," he said, "is Maid Hengerveld of Wayside. She freshened at the age of twenty-five months, at which time she weighed 1,550 pounds; and her first calf, twenty months ago, was a bouncing bull, weighing 120 pounds. She now scales more than 1,700 pounds, and the calf, which weighs almost 1,700 pounds, is at the head of the herd.

"We intend to put her in a seven-day official test this December, and it is expected she will make 30 pounds of butter.

"In all we have 30 registered females—20 cows and heifers—to freshen this November. Then we will have them all run on official test of seven and thirty days. Two of them, we expect, will make more than 30 pounds in seven days. Twenty-three of the herd are of our own raising."

In their breeding operation the boys are particular to pay most attention to performances. As a result they have a herd of high producers. Robert says that performance counts for more than 50 per cent when buying a cow, and he always wants to see calves and dams when buying a bull.

The first herd bull on the Hillside Farm was King Hengerveld 10th. All of his daughters have A. R. O. records, varying from 15 to 18 pounds at two years. The second bull was University Johanna Excell, loaned the boys by the University of Wisconsin. The third and present head of the herd is King [CONTINUED ON PAGE 46]

The Snapping Turtle Doesn't Know When to Let Go—Do You?

ANY man really worth the name has somewhat of the snapping-turtle in him—that is, when he gets a good "holt" he wants to hang on till sundown.

The real difference between a man and a snapping turtle is that a man knows when to let go—or ought to. Naturally, every man who is a man would like to hang on to the affairs he has set his jaws in till the sundown of life. And if he can do it with full justice to the

job, we say that's fine.

If not, he ought to at least loosen his hold a little and give the youngsters a chance, especially if they're keen about it.

The father of the boys Tom Delohery tells about in this story was a wise man. He had accumulated some property in his day. And he knew when to let go.

Get us straight now: we don't mean he retired—he just eased up a bit. Retiring is every bit as fatal as hanging on tight too long.

THE EDITOR.



Three of the babies

Why I Pay the Honest Grower More

I can sell his stuff without seeing it, and know it is all right. That saves time and trouble, and is worth paying extra for

By Henry Kelly, Jr.

The Man Who Wrote This Article

IF YOU could see Henry Kelly, Jr., in his place of business in West Fourteenth Street, New York, you would see a well-set-up young man, standing firmly in his ample shoes, directing the business of receiving and distributing boxes, barrels, crates, and packages containing the products of your fields and orchards in the East and Middle West and beyond. All about him is hustle, but order; and at his right hand is a telephone by which he can immediately reach every sector of this great market. He is at the very nerve center of it.

When the Editor of FARM AND FIRESIDE asked me to find the biggest distributor in New York of vegetables and fruit products, and induce him to write a heart-to-heart message to the growers,



This is Mr. Kelly

I went to the steward of one of the biggest hotels to learn the identity of this person. "Get Kelly," said the steward. "He's as big as any of them, and he has the ideas."

So I went to see Kelly. I had talked with him not more than three minutes before the hope inspired by my hotel friend was confirmed. This young man was raised right here in New York on fruits and vegetables—he was born into the business he conducts, his late father having been in the produce business for more than forty years.

All of his business Mr. Kelly has known from his youth up. He goes out into the fields which his sales cover, and he likes to travel in the country and gain first-hand knowledge of the conditions under which the produce is grown and shipped.

ALLEN EDDY.

honest farmer and fruit grower falls is that, having made a reputation for sending produce to market that is honest, and being known to the wholesale dealer, the retailer, and the man who has the corner fruit and vegetable stand by the reputation he has made, has a neighbor engaged in the same line of business. Say each grows apples. But the neighbor has never been able to realize from his apples so much as the man with the reputation. Perhaps his apples are not quite so good. "Why not market these apples under your name?" says the neighbor. "You can get more than I can," he urges.

The man with the reputation wants to be neighborly—he wants to be a good fellow. And he falls for that. He may have a suspicion that the apples are not so good as his own, but he is persuaded to take a chance and ship them under his name.

There is the fatal mistake. His reputation has been damaged in a way that cannot be repaired through long dealing according to his old standards. There always will abide with a person who buys his goods the suspicion that he will try to put another one of these substitute deals across. Perhaps things that are petty in themselves will be magnified on account of that old score.

Generally, I would say that it is unwise for any grower to lend his name to a neighbor. The mere fact that his neighbor wants to borrow it should put you on your guard. The subsequent operations usually make him an innocent victim. The grower who borrows his neighbor's name does not have the same standards for grading. Unconsciously, perhaps innocently, he marks boxes and crates 15 to 25 per cent higher than does the man with a reputation. The harm is done because that marking is right below, or above, the name of the other man. He suffers. The guilty party loses nothing because he has nothing to lose.

Supposing that right in the height of the

Also, I recall the case of a fruit grower who with his sons disposed of their other interests and enlarged their operations with fruits. At first they were not successful in this market. The father was an old friend of a large distributor here in New York, and he came to the city to see his friend and to learn what was the trouble. The big point that I have tried to emphasize herein was impressed upon him in cold, hard words. Especially he was cautioned not to accept without question the standards of grading of his neighbors—that he should absolutely know what went out under his name. The business from that time has been conducted under such a policy, and it has had a continuous, healthy growth.

The case of the man who has made his name stand high in the estimation of persons handling his produce, and then has permitted it to follow the descending scale, is difficult to explain, especially when there is every inducement for a continuation according to the tried method and policy. In at least two cases I know of this change has been due to carelessness born of declining years and failing strength. But, whatever the cause, it is certain that the positive, never-failing inducements held out by honor and honesty should be sufficient to dissipate the delusions created by any policy that does not square with those cardinal business virtues.

Furthermore, the man with the kind of reputation I have indicated will find himself continuously wooed by the dealers in the big market centers. They recognize in him a big adjunct in their business, and they will be competitors for his favor. He finds this situation to his advantage in numerous ways.

Suppose, for illustration, he has shipped a lot of peaches, all bearing his name and graded accurately according to size and quality. Also, he has a few pears which are not of a quality that would make them easily marketable. He represents those pears to be just what they are, and that is not much. Now, a dealer would do his level best to market those pears for the grower to the best advantage, possibly with no profit at all for himself, simply because he wants to handle the peaches and continue in the good esteem of this man. Such is the power of the honest grower.

Growers of fruits can make progress in the business if they will exercise great care in the selection of fruits put in one container. For instance, a grower has apples for shipment. If he will include in each package apples that are alike, of the same size and color, using great care in regard to each individual apple, he will get a price for his goods commensurate with his trouble. Those he has put aside from these fancy packages can be sold for what they are. The net result from the entire crop, if this method is employed, will be much larger than it would be if all the apples were put together regardless of size and color.

The grower should keep constantly in mind that New York, Boston, Philadelphia, and other large cities are markets where quality always has a call. Speaking for New York—and probably the same rule holds in the other large cities—I can unhesitatingly say it always wants the best, and with the best the market is never glutted.

Of course, the consumer has the big decision in the matter. But the retailer is entitled to consideration also. Let us look at the case from his viewpoint.

The retailer in New York works hard, he is busy all day long, and his day is a long one. He has to do a big business to make more than a living. When he reaches into a box or barrel of apples he wants to be certain what he is going to bring out. Aside from other considerations, it is a question of time-saving with him.

Suppose an infantryman on the battle front should reach into his cartridge belt uncertain regarding the size of the cartridge he would produce, or whether it would explode, what would be his attitude toward the man in America who packed that ammunition case? You are the ammunition packer in [CONTINUED ON PAGE 46]

CO-OPERATION and co-ordination have become familiar words in this country in the last two years, on account of work in the war. Now, if they are carried into the affairs of peace, and the whole fabric of our business is shot through with these particular qualities—well, that will be another item on the credit side of war. It will make us realize that co-operation and co-ordination are necessary in the successful conduct of business to get the best results, just as they were required to push the war through to a speedy and full conclusion.

So much by way of introduction. Now let us get right down to cases. What about the raising and marketing of fruits and vegetables in our great East and Middle West?

Generally, the answer is co-operation between the grower and the dealer—all along the line from the fields and orchards to the table, through all the channels and processes.

The business of the grower of fruits and vegetables may be divided into two parts—the production of the goods, and the marketing of them. On the first division I have nothing to say. Wonderful progress has been made by the American farmer and fruit grower in the production both of quantity and quality. They are putting their brains as well as their strength into the business, and, what is equally important, they are maintaining their farms in a high state of fertility. Even with all this they are still confronted with the problem of marketing their produce.

In this connection I have been asked to put my finger on the big pulse beat for a sort of diagnosis; and I do so confidently. Here's my word—*pack your fruits and vegetables carefully, and grade them accurately.* You have heard that before, but have you done it?

Since this is a heart to heart statement, let me be completely frank, and do no pussy-footing. It is first of all of vital importance to be honest. Honesty is the best policy, quite apart from the ethical and moral aspect of the case.

Any grower of fruits and vegetables who packs a box and puts on the outside of it words and figures that tell exactly what is inside has gone a long way toward solving the second half of his problem. If he sends a box of apples or a crate of berries to the New York market and marks them as just what they are, he has made a beginning. If he follows that up with another shipment, also marked exactly and accurately, he has taken another step. It will not be long before his name is known to stand for honesty and reliability, and his shipments will be easily marketed at the best prices. They will come to sell themselves on the guarantee his name carries.

I hear some doubting ones say, "Oh, that's all right for the big fellow, but I'm so small I'll never be known, anyway."

The man who adopts that policy will never be a success. More than that, he has guessed wrong, for the shipper, no matter how small he may be, who grades his stock honestly becomes known immediately. Of course, the more goods he sends, all carrying his honest label, the more quickly and widely he will be known; even so, the little shipment will serve as an introduction and as an index to the sort of man he is, and I confidently assert that the money return will be sufficient to encourage him to continue honestly.

It pays to make a reputation; but that is not all—you must work to keep it. There are no days off in that business. It is sad to see a man wreck a reputation he has built up through years of consistently reliable dealing. Yet that's the rock on which many a good ship goes to pieces. Some men go along so well on a reputation established by shipping goods accurately graded that they try to make that cover an occasional shortcoming. Nothing doing. It can't be done.

So another big thing for the farmer and fruit grower to bear in mind is that his boxes, barrels, and crates should tell the same honest story day after day, week after week, and season after season.

Another pitfall into which many an

A Cartoonist Who Works for Farmers

By Edwy B. Reid

THE barbarous barberry, a cereal story, is the first animated cartoon ever used to explain a farm problem and to inject enthusiasm into an agricultural campaign. Perhaps you are at a loss to know what is barbarous about this barberry. Here's the answer:

This animated cartoon was conceived by Mr. G. D. George while making educational exhibits in connection with the Department of Agriculture's campaign to reduce the heavy toll that black stem rust takes annually in the large wheat-producing areas of the country.

For years Mr. George has been a cartoonist on a Western paper. He also has been a salesman, inventor, and maker of animated cartoons. Being a man who throws his whole energy into his work, he became deeply interested in the problems connected with the eradication of the common barberry bush which science holds responsible for the spread of black stem rust on wheat.

The growth of this disease is a sort of sleight-of-hand trick in itself; first you see it, then you don't. In the spring stage it passes from the leaves of the common barberry to the wheat plant. The barberry thus is the center of distribution for miles around; for the disease, once started, spreads rapidly and widely.

The barberry-eradication campaign aims to eliminate this source of infection, and in a way is comparable with the clean-up campaigns of the Public Health Service directed against swamps and other nuisances which may harbor human diseases. Mr. George adopted the animated cartoon so that he might enlarge upon certain phases of the growth of the rust, and thus



G. D. George at work

show on the screen how it invades the wheat fields and reduces the grain crop. His scenario reads something like this:

The farmer is shown in his grain field, and the wife with her flower garden and shrubs. The farmer laments the fact that he has many crop failures, due to rust. He blames it on the weather. "It's the dampness does it, the same as it rusts the pump." His wife facetiously admonishes him to "bring the wheat in nights."

The next scene finds the farmer reading and the wife knitting. The farmer reads that the grain rust is spread by the bar-

berry bush. Both farmer and wife are skeptical, but at this point Science enters the door with a big magnifying glass. She shows the rust on the wheat stubble and wild grasses in winter, and explains how the spores, or seeds, of the rust blow to the barberry plant in spring, where they rest until a drop of rain or dew strikes them. Then they germinate, and the sprouting rust threads penetrate through the outer layers of the leaf, destroying the cells and later building homes for themselves in the wheat. From these homes, or cups, in the barberry leaf the

spores alight on the stem and leaves of the wheat, where they germinate, and throw out infection threads which travel along the surface until they reach a breathing pore, which they enter, develop branches, and encircle the cells, destroying them.

With her high-power magnifying glass Science now shows the accompanying growth of the disease and the forming of what she calls the "red spores." These burst the skin of the stem and escape. They are then blown by the wind to other wheat plants, which they infect, the process being repeated almost without end. The harvest time approaches. The black spores begin to develop. The rust is shown reaching the wheat heads, and the kernels begin to shrivel. Science then shows that the black spores do not infect the wheat, so that the distribution of the spore ceases for the season. The damage to the current year's crop, however, is done. Science then points out that the black spores winter on the stubble and wild grasses, and are ready to attack the tender new leaves of the barberry plant in the spring. The barberry bushes, however, have been a source of pleasure to the farmer and his wife, and digging them up is not accomplished without regrets.

Then follows the final act: The farmer has planted his fields and the wife her garden; the wheat crop has ripened without the usual accompanying ravages of rust, and a heavy grain yield is obtained. Great joy is registered by the farmer, his wife, the dog, and the other farm animals. To add to their happiness they have learned that they can plant Japanese barberry in place of the common kind, with no danger to the wheat fields, because rust is not spread by the Japanese variety.

What Jennie Wren and Her Hubby Did for My Crops

By Leslie E. Troeger

WHILE you are figuring a way of beating out the bugs this summer don't forget Jenny Wren. She's the best little exterminator of garden insects I know of.

Give the little lady a cordial welcome to come and stay all season. Then watch her and Hubby Wren, some time, go after the 'hoppers and beetles and the rest of their kin. It will open your eyes. I did, and had lots of fun too.

Early last spring the lady of the house came home from town with one of those little wren houses so often pictured in the magazines. The manual-training boys of our township high school made them, and the proceeds went to some charitable cause.

I was terribly busy, but put the little cage up on a ten-foot pole near the garage. Then we watched and waited, and pretty soon along came a pair of twittering wrens who looked over the place, fussed around several days, then started to build.

In due time the little home was fitted out; then we saw but little of Jenny Wren for some time, except when she made hurried trips to near-by bushes for food. During this period Hubby sang as he never sang at any other time, and guarded the nest against sparrows and other enemies with a vigilance that was often laughable.

One day there were signs that Mr. and Mrs. Wren were the happy parents of a thriving brood, and it was soon after this that I made observations that changed my mind about bird talk being all sentimental stuff. For three hours one Sunday afternoon I made a careful record of the trips made to the nest by the two birds in feeding their young, and they came in with bug morsels just 116 times.

Jenny would come out of the bushes like a miniature flying machine, with a bug in her bill, light on the little veranda of the house, dart in, and the next second out she'd come and off again for another drive on the bug hordes that drove us mad.

Another interval, and Hubby Wren would appear with a green 'hopper securely in his bill, and deliver it to the hungry brood, then off again. Such appetites as those young wrens had! And with what feverish energy those parents worked to

satisfy them! It was wonderful, and the bugs were getting it in the neck good and proper. It gave no small satisfaction to think how many of those same imps of bugdom had perhaps laughed up their wing at my hard efforts to soak their hides with insecticides all spring.

For days you could see one or the other

of those parent wrens industriously carrying bugs to the youngsters. Then one day the entire brood disappeared, but shortly after we found them in a dense bush nearby. There were six of them, and here they were evidently learning under this safe cover to hunt their own bugs and become wise in the ways of the world. During this

period of ten days or more Mother and Father Wren carried innumerable insects to their brood as they had in the nest, taking short intervals of rest and song during morning and evening hours.

How many hundreds, thousands, of bugs that pair of wrens and their brood put out of business for us I can only guess. They were a-plenty. If bugs have any means of expression I'll warrant they counted that pair of wrens bug-eating demons.

What a fight they had with the sparrows before they got fully settled down in spring! The nifty sparrows were bound to occupy the little house. In vain they tried to squeeze into the two entrances, but they were only the size of a quarter of a dollar. When you make your box, remember this if you want wrens and not sparrows. Any box will do, put up anyway that it will stand the wind and shed water. There ought to be a little opening in the roof to give a free circulation of air on hot summer days.

Another pretty exhibition of bug catching I saw one evening in our garden by a little bird I have not been able to identify.

I was about five paces from the end of a row of dwarf peas where he lit and began operations. He was very systematic. He'd start at the bottom of the vine and clean up the aphids as high as he could reach. Once in a while he'd jump up to grab off a sinner. First here, then there, he would poke his head, inspecting every leaf.

Soon as he'd cleaned up one vine he'd hop quickly to the next, and go over it the same way. Sometimes he would go around a vine twice, so as not to miss a morsel. You'd have thought he had orders direct from Mr. Hoover to conserve food supply. He must have picked off a bug every second until he flew away. I figure he got 444 aphids.

The more I think of that little bird the more I marvel over his bug-devouring capacity. I had read many times of the good friends we farmers have among birds, but I never believed half as much as I saw in those few moments in my own garden. So I say, "Keep your eyes open, folks!—the world is full of wonderful sights, and we can learn all the time."

How Clenens of Iowa Gets Both Milk and Calves

W.R. CLENENS of Buchanan County, Iowa, is a producer of baby beef who doesn't put all of his eggs in one basket. In his business he has two irons in the fire, and one saves him from losing on the other, with the result that he profits on both. In other words, he has dual-purpose cows, from which he gets milk and calves.

He has been milking cows and breeding baby beef for the last three years, and he says he can make more money at this than by feeding aged cattle for market. Like some farmers, he claims that the price of feeding cattle is getting so high that the gambling element of the business is increasing.

"I have 20 grade Shorthorn cows," he said, "which give me a crop of calves each year, and a cream check each month. Moreover, I get the skim milk, which I feed to the calves and hogs."

"It is more difficult for us to raise calves—that is, for the first month or so; then it is all right. We don't let the calves suck the mothers but for the first four or five days, when the colostrum period is on and the milk is no good for human use. After that they get skim milk. We feed oats in addition to the skim milk. Once they are eating oats we never take it from them. They get the milk until weaning time, when it is fed to the hogs."

"The weaning is usually done in November, when they are started on the winter ration of silage and oats. The next spring, when the grass is ready, we turn them on pasture with oats; and a few months before marketing we feed corn to round them out."

"It requires more than a year to make a calf in this manner, but you have two incomes after the first year. The cream checks keep up the income until the calves begin to sell. Moreover, the milking distributes the cost of labor."

T. J. D.

Things You Can Do to Keep Your Horses Fit

By Dr. H. M. Dutcher

MY TWENTY years of practice as a veterinary has proved to me that 85 per cent of all horse diseases can be traced directly to indigestion. The stomach, intestines, and liver are all vital parts of a horse's digestive anatomy, and improper functioning of one or all of these organs is what causes trouble.

Digestive disorders are the result of exposure, or improper or improperly prepared or administered food, two things over which you, the owner of the horse, have absolute control. Remember that, and perhaps the next time you have a sick animal you can tell why he is sick.

The best way to keep a horse well is not to let him get sick. This statement may sound rather flat and pointless, but it is true, nevertheless. The horse, in his wild state, could choose just what he wanted to eat, and the food at his disposal was just what he needed to keep him in good health. He never got colic or heaves, because nature saw to it, through the animal's instinct, that the food was of the right kind, and he seldom caught cold, because he was used to exposure and had never known the feel of a blanket or a barn.

But the horse's environment is changed. Instead of being his own boss, he is now subject to your will. He has no choice of food, but must take whatever food, in whatever quantities, you give him. Whether he is hot or cold, whether he has a warm, well-ventilated barn or a tumble-down lean-to, it's not for him to object. He either stands it or he doesn't, depending on his vitality and resistance.

Exposure may occur in many ways, and each one of these ways is preventable. If your stable is drafty, nail building paper and weather stripping over the open cracks. If a window pane is broken so that it allows the wind to blow directly on the animal, fix it. Plenty of ventilation is very essential, but not the kind that lets the incoming air enter through the cracks and broken windows.

In extreme weather it is a good plan to blanket your horses, not with a heavy woolen blanket, but with a medium-weight cotton cover. Keeping him too warm is just as bad as letting him stand and shiver. It is much better to remedy the building itself, rather than weaken the horse's vitality by blanketing. I have known cases where the animals came into the stable at night sweating profusely, were blanketed with a heavy woolen affair, and left that way until morning. The blanket made them all the hotter, until it finally became soaked through, and the poor horse stood there all night with a cold, wet blanket on. Such occurrences are not conducive to the best of health, whether it be in man or beast.

Horses suffer no ill effects from being turned out all winter, provided there is plenty of forage and a well-bedded shed where they can sleep, and go into when it storms. It's not being out that hurts them, for I imagine they can stand more cold than we think, but quite often they are turned out into the fields or pastures, without first giving them a chance to get accustomed to the changed conditions.

It is just as if you were to be suddenly compelled to camp out in the open where you had previously been used to a nice warm house. It would be mighty uncomfortable, even though you could put on an extra overcoat or two; but the horse cannot do this. Before he can grow that needed covering in the form of hair he is quite apt to get a hard cold that will hang on all winter, and he will come out in the spring in a more or less weakened condition. Instead of shooting him out into the open for good, try letting him out for a few hours each day in some pasture close to the house, and let him gradually become accustomed to roughing it. It seems like a small thing, but it may mean a great deal to the horse's vitality.

Sickness resulting from needless exposure is primarily a lung trouble, but it will also have its effect on digestion and assimilation of food. Every organ in the animal's body is in sympathy with all the other organs, and if one does not function properly some other one will also be halted in its stride.

As food generates heat, the animal in its attempt to keep warm will eat a greater volume of food than usual. In fact, owing to being out in the pasture or stalk field, he is compelled to eat a greater

of the animal until the veterinary can get to the farm.

I think colic occurs more often than any other ailment of the horse. There are two kinds of colic, wind and spasmodic. In-

If You Can't Use It, We Can't Either

WE DON'T go in much for literary flourish on FARM AND FIRE-SIDE. What we want is common-sense stuff, interestingly told, by men who know what they're talking about. So our readers can get some good stuff out of it. If you can't use it, we certainly can't.

Take this article. We think Dr. Dutcher knows his business. He was Veterinary Surgeon, U. S. Army, at West Point, for thirty years. No man could stick with so exacting an institution that long without being up on his toes. Moreover, he knows farming. He was born on a farm in Putnam County, New York, and lived there until he was twenty.

Dr. Dutcher is also a West Point graduate, and since 1908 has been in private practice at Peekskill, New York. He was one of the pioneers in the use of tuberculin for dairy cattle. He's worth heeding.

THE EDITOR.

volume in order to get the same effect as he would from more concentrated feed. This overloads his stomach, plugs him up, and while horses are not so susceptible to impaction of the bowels as are cattle, you can't afford to take any chances. Let him get a little used to exposure and rough feed before you go off and forget him entirely.

I said before that 85 per cent of the sickness of horses can be attributed directly

jection of salt and water will often give relief in wind colic, and the internal remedy is two doses each of two drams of salicylate of soda in one-half pint of water, administered a half-hour apart. This latter remedy I believe to be the best in the world for this particular sickness, and I believe the profession will bear me out in that statement. Treatment for spasmodic colic consists in the application around the abdomen of a blanket soaked in hot water

stand the affected feet of the animal in a bucket or tub of hot water, changing the water every two hours at least.

Constipation should be treated by proper feeding rather than with physic, but where the case is associated with pain immediate action is necessary. Small doses of Epsom salts, from four to six tablespoonfuls to the dose, three times a day, will bring relief, or two drams of nux vomica three times a day for five days. Either remedy is good; both can be given at the same time.

Blind staggers is caused by constipation, lack of exercise, or too much feed, and usually a combination of the three. A physic of aloes or calomel, or both, will put the animal on its feet in good shape.

Heaves is a very common disease among farm horses. It is a disease that develops slowly, it is very persistent, and submits to treatment about as slowly as it develops. The first thing to do is to change the food. Avoid hay as much as possible, feed concentrates, and keep the bowels loose. Two ounces of tincture of lobelia with a six-ounce Fowler's solution of arsenic, administering a tablespoonful three times a day, is the best treatment I know of. As I said before, the disease is a hanger-on, so don't be disappointed if you fail to get immediate results.

I have enumerated several of the most common diseases. What I am going to do now is to tell you how to feed your horses so they won't get sick. There is a much over-worked saying which tells us that "charity begins at home." I like to change that a trifle and make it read, "horse's health begins in his feed box."

Proper feeding consists of giving the animal the right kinds and amounts, at the right time, of roughage and concentrates which will nourish him and keep his bowels loose and open. It is not necessary to get a special kind of feed. The common, ordinary feeds, such as corn, oats, bran, and hay, products of almost every farm where horses are kept, are quite enough. Whether or not you grind your corn and oats is a matter of choice, although it has been proved that ground feed is more readily assimilated by the animal, and it does not require quite such a large ration to keep him in good condition.

When you come in from the fields at night, let each animal have just a few swallows of water. It is cool and refreshing, and will make him feel better. Please note, however, that I said a few swallows. Do not let him drink his fill. The common practice is to unhitch, give him a slap over the rump with the bridle, and habit tells him to rush to the tank and drink all he can hold. There is nothing worse for a horse when he is hot than to fill his stomach with cold water. It will retard digestion as will nothing else, and it is one of the best ways in the world to bring on colic.

There is a very important thing about the horse's anatomy and digestion of food that I feel very few farmers and horsemen are familiar with. This is that all roughage, such as hay, is not digested in the stomach, as we would naturally suppose, but in the intestines, while the concentrates, like grain, are digested in the stomach in the natural way. Keeping this in mind, what is the first thing you do when you get the harness off? You answer, feed the horse. Quite right, and you proceed to give him his full ration of hay and grain at the same time. As the animal can't reason, and has no way of telling what is good for him and what isn't, he eats his grain first, and then starts on his hay. What happens? The grain he has eaten, instead of remaining in the stomach, to be digested like nature intended it should be, is pushed by the hay back into the intestines, as the latter has more bulk and volume than the grain, and is merely seeking the place where it should be. As the intestines are not capable of assimilating this grain, it passes out of the animal without doing him a particle of good.

The proper procedure is to feed him his hay first, give him time to eat it, take him out and let him drink his water, and then feed the grain. By this time the hay has passed back into the intestines where it should be, and the stomach is left free to handle the grain [CONTINUED ON PAGE 48]

She's the First Official Woman Cow Tester in Iowa

THIS, FARM AND FIRE-SIDE readers, is to introduce Mrs. H. M. Rochau, of Iowa, the first official woman cow tester in that State, and among the first anywhere.

To be an official cow-test lady meant to travel up and down Iowa to the big dairy farms where pure-bred cattle of advanced registry are kept, and to supervise tests. The report of such tests mean a lot to the breeders. Efficient testers only are wanted, for good service is demanded. It was certain from the beginning that the dairymen would look askance at a woman on the job. Yet, the work had to be done. So it happened that Mrs. Rochau got the job.

She has been going about Iowa ever since August, 1917, from large dairy farm to large dairy farm. Sometimes where the herds are large she stays two or three weeks. This is her day's schedule:

Arise at 5 A. M. and go to the barns with the milkers. Watch milking, weigh milk, and take samples. After breakfast and remainder of day, except

for noon hour, make tests of samples of milk for butterfat and prepare reports. Supervise milking at evening just as in the morning.

On farms where they milk three times a day Mrs. Rochau is up again at midnight.

"Don't you want a chair taken to the barn?" said a dairyman to her as she made ready to supervise the first tests on his farm.

"Well," she answered with a laugh, "you are the first to ask me that. The men treat me just as they would a man, and I don't expect anything else."

Professor Mortenson was asked the other day what he had to report about the work of his first official woman cow tester. He answered:

"Mrs. Rochau holds the record of carrying on this work as well, if not better, than any man who has ever been in our service."

Mrs. Rochau feels that there is a real place for women in farm work if they are willing to do the work of a man uncomplainingly.

FLORENCE L. CLARK.



Mrs. H. M. Rochau

to indigestion, or its consequences. I am not going to give you a lot of technical names of diseases. That would only be confusing, and of no help. But I will mention a few of the more common ailments, and what to do for each. The remedies I mention are everyday curatives, and should, probably do, appear in every farm medicine chest. They are for relief

and liberally sprinkled with red pepper or turpentine. Have the water as hot as the animal can stand, and change the blanket every half-hour.

Treatment for founder consists of 20 drops of aconite in a tablespoonful of water, administered every two hours for six or eight doses, and after that three doses daily. The external remedy is to



HUNGRY, but *a-hidin'* it, er jest a-not a-kerin':
 Kingfisher gittin' up an' skootin' out o' hearin';
 Snipes on the t'other side, where the county ditch is,
 Wadin' up an' down the aidge like they'd rolled their britches!

Old turkle on the root kindo-sorto drappin'
 Intoo th' worter like he don't know how it happen!
 Worter, shade, an' all so mixed, don't know which you'd orter
 Say: th' *worter* in the shadder—*shadder* in the *worter*!

James Whitcomb Riley.

Our Letters to Each Other

WELL, folks, you certainly came across royally with what was on your minds. Some of you side-swiped us, some of you belted us spang in the solar plexus, one or two of you took a whack at our nose, and a great, great many of you said things that made us feel you rather like us. And every one of you, without exception, gave us credit for being sincere. That pleased us most of all.

Sincerity is a great thing. We long ago came to the conclusion that sincerity deserves admiration wherever you find it. We have more respect for a good, thorough-going highwayman who is sincere than we have for a church deacon who's a hypocrite. If this be Bolshevism, make the most of it. Now for the letters:

Our Hat's Off to Him

"FARM AND FIRESIDE has come to my address for nearly forty years. The thing that's on my mind is timber. It's being swept off the earth like straw before a fire. Fuel wood has gone up \$10 and \$15 a cord, and even more in some places.

"To help solve this problem I'm for a wood lot on every farm. Our native timber can be cut off clean if cut before it is a foot in diameter. You won't get a second growth if you cut it after that. Let the trimmings lay where they fall, for mulch and moisture, and the young timber will start from the old seeds thicker than ever. And every farmer can have a perpetual wood lot in this way by cutting every ten to fifteen years. But the live stock must be kept out.

"If you have a 10-acre wood lot and you cut half an acre a year, it will take you twenty years to get to the last half-acre, or ten years at an acre a year. I have sold half-acre lots that furnished a family fuel enough for two years—second cutting.

"Yours for a wood-lot on every farm."
P. C. L. R., Minnesota.

That's bully, Mr. P. C. L. R. We not only hand you the palm for a good idea, but we nominate you for president of the FARM AND FIRESIDE Charter Member Club. You infant subscribers who have only been on the list a mere twenty-five or thirty years can only have half a vote apiece on this nomination. Good luck to you, P. C. L. R. And may you live long and prosper.

That's the Stuff

"I was asked to subscribe to a farm paper by an agent, and I told him I had been a subscriber to FARM AND FIRESIDE for between thirty-five and forty years. He said that is no farm paper—it is only a household and story paper. I told him I knew it was a family paper, but that it is also the best farm paper and that I would defend it; and for his talking as he did I would not have his paper under any consideration, and it was no use to waste time. You are privileged to use all of this, though I am no writer—only a cultivator of Mother Earth."

W. W. W., Pennsylvania.

By golly, when your friends stand up and fight for you like that, it's worth while! Soak 'em again, W. W. W., if they come around with any more of that bunk! And as for your being "no writer," let me tell you this: Every man is a writer who writes what is in his heart, what he knows, and what he believes in. The touchstone of all good writing is sincerity, and we personally think more of real, from-the-heart-out words like yours than we do of a lot of writing that is done for money.

We Like Bruce, Too

"Bruce Barton's talks are what is on my mind. They are the best thing I have read in a long time. Last month he told a young man to go back to his work and find out some plan whereby his employer could improve on his way of doing business. That is fine, good advice."

E. L., Oregon.

We have passed your question on to Barton, E. L., and we'll see what he does with it. Most of the FARM AND FIRESIDE family must like his talks just as you do—so many of them write in about them. And to answer those who have asked if

they are collected in a book anywhere, let us say that they are, and you can get a copy by writing FARM AND FIRESIDE, 381 Fourth Avenue, New York City, and enclosing a dollar.

Still She Likes Us

"I will write now what I expected to write at the end of the year. The paper has been coming to Mother for probably twenty years. We have always liked it, and subscribe for three years at a time. Last summer there began to be such crazy articles in the paper that I said, 'We'll quit when our time is out, and I'll tell them why, too'.

"One of the stories to which I object, and which is a fair example of all the objectionable ones, is 'Ten Acres and a

and the work. We keep from three to seven head of cattle, fourteen sheep, a brood sow or two, a horse, and fifty hens. There are now five colonies of bees, and that is enough for me with the rest of the work, but Mrs. Tupper has twenty, and of course they don't require any time at all and produce \$264 worth of honey.

"Mother and I have lived on farms practically all of our lives—the last ten years on this 70-acre farm—and do all the work we can ourselves, hire when there is anyone to hire, and have the fields farmed on shares when we can find anyone to do it, and we have no time to play. We seem to be doing just as much as any of our neighbor women, and to be just as smart. If we were as smart as Mrs. Tupper I suppose we would farm the whole place, and then we wouldn't be as smart as the woman we

bet your life it did us a lot of good. The downright truth of the matter is that we realized, just about the time you did, that things were creeping into these pages of yours and ours that had no business there; and we are standing at the door here, night and day now, with a big, sharp, glittering ax, to keep them out. If you spot any more of them, D. W., jump on us again.

But don't be too hard on us, folks. You know we are getting along in our forties as a magazine, and with a magazine, just as with a human being, you can't live for forty years without having your ups and downs. We believe that now we are moving into a long, long period of ups. And with your help we'll not have any more downs in this generation. And no matter how old we grow in years—and we expect to live a good many hundred years, editorially speaking—we always will be young in spirit, and truthful, and honorable, and decent, and clean and sound, to the best of our ability.

A. W. C. of Michigan sends us a very interesting letter saying that one of the big problems of the American farmer is the problem of labor and co-operation. Right you are, A. W. C., and we hope you will read William Harper Dean's article on this subject on another page and let us know what you think of it.

All Right, Roscoe!

"I will try to write you a letter this evening. I have been taking FARM AND FIRESIDE for two years, and I think it is a nice paper to have on the farm. I have subscribed for it again. I belong to the Corn Club in Rochester County, and have been a member for three years, and on my second year I won a prize for my corn and my record book, and I think that my county agent had FARM AND FIRESIDE sent to me the first year, and I have been taking it ever since then on up to now. I am just a young boy at the age of sixteen years, and I want you to publish this letter in the FARM AND FIRESIDE, and if I see it published in the paper I will write another one and have it put in the paper too." Roscoe Proctor, Orlando, Kentucky.

Well, Roscoe, we are delighted to hear from you. And what you and I have to do, Roscoe, is work hard and think hard so that we will be worthy successors to the good folk who are some years ahead of us. I can tell by your letter that you've got the stuff of which good farmers are made—that is, determination and a liking for hard work and plenty of it.

We Have a Fight

But of all the letters we have received the ones from John E. Bell, a farmer and a wise man of Columbiaville, Michigan, probably stirred things up the most. The first time he wrote he was mad—mad as a hornet about a two-column article in the February issue entitled "You Should Borrow More." Perhaps you recall it. If you don't, and are interested, you might look it up, because it started about as lively a time as we have had for many moons.

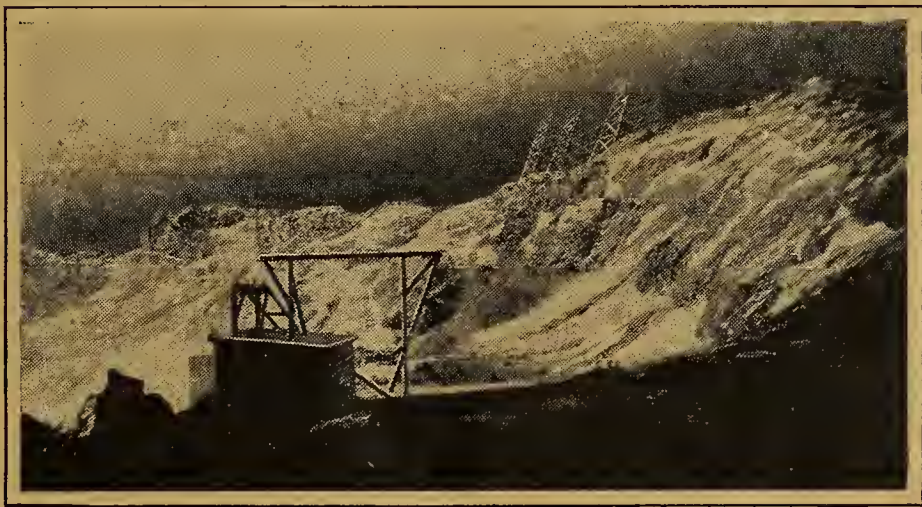
Well, Mr. Bell wound up his first letter with a very decided opinion as to what kind of a fool the Editor of FARM AND FIRESIDE was, and instructed us to cut him off the list.

We wrote back and told him evidently he had some convictions on the subject of farmers and bankers, and asked him to sit down and write them and we would print them. He wrote back about 1,500 words in which he proceeded to take our hide off and hang it on the fence again, and we replied with about 600 words of the same color. But he did more than hide us—he answered the "Borrow More" article. And in our 600 words we did more than answer him roughly. We told him some of the things we hope to accomplish with FARM AND FIRESIDE.

As a result of this correspondence we are friends. We could very easily have become enemies. But we took the trouble to understand each other; and folks who do that cannot long remain enemies.

In the June issue we are going to print Mr. Bell's letters and our answers, so you can all read them. Good luck to you all! GEORGE MARTIN, EDITOR.

Will the Flood Light Win a Place in Night Farming?



COYOTES have become a pest in many parts of the West, and around Los Angeles the ranchers have found them hard to exterminate because they are too cunning to be trapped and too wise to come out in daylight and be shot.

But the "Western Electric News" reports a new scheme:

One rancher installed a flood light on a twenty-foot trestle alongside his barn. This is turned around the hills at night. It finds the coyote, and shooting him with a high-powered rifle is good sport.

The flood light is not a search light, but one of the type used to illuminate buildings by bathing them in light. It illuminates a wide range of ground for a short distance, but, by the use of a search-light reflector, which was employed in shooting coyotes, it reveals animals of that size, and permits accurate shooting at 2,000 feet, or nearly half a mile, and finding them within a circle of 4,000 feet.

An installation of this kind costs from \$60 to \$70, obtainable at electrical supply houses, and might have farm uses for night work, such as threshing, silo-filling, plowing, and so forth. J. H. C.

Living' in the July number. This city woman who knew absolutely nothing about farming goes on a farm, takes all care of 400 chickens, a pig, a cow, bees, and a large garden (presumably all of the ten acres is not occupied by chickens, house, etc.), and hires a "very little help." Also, it appears that she never made a mistake, never had any "bad luck." People that have spent their lives in farming can't make such claims. Besides doing all this work herself she carries all her produce to the city customers (and, believe me, that is some job, delivering produce to the consumer—we have had experience). She prepares her poultry for the shows and attends the shows for days. Who feeds her stock while she is gone? She doesn't hire help. Our stock has to be fed every day. Especially in the winter, when poultry shows are held, they need extra care. Hens surely do if there are to be winter eggs, but we have always gotten winter eggs, but we have to see our hens once in a while. Then she cans 900 quarts of vegetables from her garden—doesn't say anything about fruit. That would keep an ordinary farmer pretty busy with all the rest of the work. I have about an acre of garden and small fruits, and have the full care of it, except preparing the larger part of the ground in the spring, and everybody thinks it is wonderful, both the amount of stuff raised on it

read of in another number who farmed 200 acres entirely alone (I never saw the man who made any pretense of doing that), taught a class of domestic science and one of French each week, spent two weeks each summer at a summer resort, and her winters in Florida, besides making some lecture tours. I've forgotten how it all ran.

"I suppose these farm papers make lots of money out of their paper farming, but real farmers like to read in their farm papers the actual experiences of actual farmers. When we want fairy stories we will read them elsewhere.

"There have been some good things in the paper, but one gets so disgusted with these fairy tales that one doesn't feel like believing anything in the paper.

"The last number is not so bad, and I am hoping it will improve, for I would like to continue taking it.

"I enjoy the two pages of pictures every month.

"Now I have given you just what you asked—what is on my mind—and believe I feel better for it.

"I am, as always, the friend and well-wisher of FARM AND FIRESIDE."

D. W., Ohio.

That makes us feel like a little boy who has been naughty and got spanked, D. W. But probably we deserve it, and you

Do You Think Secretary Houston Ought to Get Out?

THIS magazine doesn't care one blithering whoop whether a man is a Republican or a Democrat, so long as he has the brains and the backbone to do his job.

And no matter how smart he is, if he is the wrong man on the wrong job he ought to get out, or be put out.

We believe David F. Houston is the wrong man on the wrong job, as Secretary of Agriculture.

Criticisms of him as Secretary are many and varied. In our opinion, they warrant the statement that Mr. Houston is not acceptable to the majority of the farming interests he is supposed to serve. If such is the case, he cannot adequately serve them. If that is true, he ought to get out and let someone get in who is acceptable and who can serve them.

This is too critical a time in the history of American agriculture for any unacceptable person to block, for any avoidable reason, the development of farming to that new and high plane of business organization and efficiency toward which it is tending.

The day of the American farm as an organized, legitimate, profitable and attractive *business* is at hand. The incompetent farmer, where he is still occasionally to be found, is either making himself competent or dropping out. All the more reason why there should be no incompetence in high positions which are supposed to house government leaders.

Our chief criticism of Mr. Houston is that he is not liked by the average farmer, and hasn't his confidence.

There are those who have recently risen to say that the Secretary is opposed to giving the farmer any facts as to how much it costs to produce various foods; and quotes him as saying that the farmer's business is to produce, and that the Department's only business is to urge him to produce, that it has no concern with what it costs him to produce.

Whatever may have been the Secretary's attitude toward this question in the past, we do not believe he now holds such views. At any rate, he isn't acting on them. He gives outward and visible signs of genuinely seeking cost-of-production data for the farmer. Whether he will get them, and get them right, and get them *within a reasonable time*, remains to be seen. They are urgently needed. *Now*. Ten years from now won't do.

Lack of accurate production-cost figures is one of the things that has helped keep the rank and file of American farmers from making faster progress. Farming will be on a much better basis in this country when every farmer has those figures. No business has ever succeeded whose manager didn't have cost figures. To determine the cost of production is the first principle of any good business.

Where is the factory whose manager, being given an order to produce a certain number of any article, would dare to say he "guessed" they would cost "about" so much? Or who, having produced the articles and being asked to set a price on them, would say he "believed maybe" a profit could be made on them at such-and-such a price?

How far would this country have got in building an army to win the war if General Crowder had "guessed" that there were so-and-so many men available, and Secretary McAdoo had "guessed" it would take so-and-so much money to train, equip, and

maintain them, and Secretary Daniels had "guessed" they would have enough transports to carry them?

No, successful business is not done that way.

In every human undertaking, whether it be farming, or manufacturing, or building, or fighting, or what not, these vital questions must first be answered:

What am I going to do?

How am I going to do it?

When am I going to do it?

Where am I going to do it?

Why am I going to do it?

What is it going to cost me?

Can I finance and equip it?

Is it reasonably sure to be profitable?

And if David F. Houston has opposed giving American farmers production-cost data on which to base logical answers to these questions, he was most grievously at fault.

It is frequently said that Mr. Houston doesn't understand farming problems; that

he has no conception of farm needs; that he is a man who deals principally in theories and fancies.

The indictment of him is long and wearisome, but we are not in a position to say that any one of these many criticisms is wholly right or wholly wrong.

We have no desire to be judge, jury, or executioner of any man on the say-so of any other man or body of men.

We repeat here again the fact on which we base our original statement that Houston is the wrong man on the wrong job, and that he ought to get out.

He is extremely unpopular with the people whose interests he is supposed to serve. You cannot help a man who does not like you, and who has no confidence in what you are doing. And David Houston is not liked, nor is he confided in by the American farmer.

If an official does something that makes him unpopular, and he can afterward show, or the facts show, that he did what was *right* and for the best interests of all concerned, his unpopularity will vanish like the morning mists. That has been proved again and again in the case of Herbert Hoover. His, from the beginning, was an unpopular job. He has done many unpopular things. But we wouldn't go so far as to say that Hoover is personally unpopular. He has made mistakes—and admitted them. But he has won our admiration and respect for his courage, his sincerity, and his integrity and sound judgment.

We do not question Mr. Houston's courage, sincerity, and integrity. We do question his sound judgment. Has Mr. Houston shown that what he has done has been for the best interests of all concerned? Do the facts show it?

Our personal feeling about him is that he hasn't a great deal of interest in his job. He seems to be tired. He gives the impression of a man more interested in abstract economic discussion of remote possibilities than in getting out and battling with work-a-day facts.

A man told us the other day that he believed Houston really was tired, that he would like to quit. Possibly so. Possibly not. We don't know as to that. But we do know this: a man's interest in his job and his efficiency on the job are the only things that should avail to keep him at that job. Lacking these, David Houston ought to pack his Russia leather handbag and go home. There are others better suited to the work. We won't mention any names, because this magazine is not in politics, and we are not going to father a political campaign for anybody. All we are interested in is seeing in Washington a better Secretary of Agriculture than David F. Houston has been. And we confidently believe that if the farmers of this country would rise together and *demand* it, we would get a better one.

If Mr. Houston has any views on this subject, and would like to put them before the 700,000 subscribers and the 3,500,000 readers of this magazine, we will be glad to print anything he may care to say. We would, in fact, be very much interested to hear from him his own opinion as to whether he has succeeded or failed as Secretary of Agriculture.

And if you readers of FARM AND FIRESIDE have any definite, constructive facts showing wherein Houston has either succeeded or failed, we wish you would write them to us. THE EDITOR.

"Something Happened to Stop Ned Parker"

By Bruce Barton

A GROUP of us were talking at luncheon the other day, when someone mentioned the name of Ned Parker. And immediately the same question burst forth from three of us together.

"What has become of Ned?" we asked. "No one seems to hear about him any more."

A quiet-spoken man, somewhat older than the rest, answered very deliberately:

"Ned Parker had as good a start as any man I ever knew," he said. "He was handsome and talented, and his legal training was first class. Until he was thirty-two he showed every promise of really big success. And then suddenly we ceased to hear about him."

"He is still making money, but that's all you can say. The idealism has gone out of him. He's traveling on the momentum of his earlier years. Something happened to stop Ned Parker. I wonder what it was."

A score of times in my short experience, I have seen such cases; the world is full of Ned Parkers.

Men who start brilliantly, their eyes lighted by high purposes; and in their thirties, or their forties, something happens to them. They lose their fine enthusiasm; they may grow rich, but they no longer grow.

We speak of youth as the critical period in a man's life; but the follies of youth, after all, seldom work any vital hurt. It is the middle years that are critical; the years of disillusionment, when youth's mirage fades out, and the question comes whether it's all worth while.

"And Noah—was drunken," says an old and very reliable book.

Nor is the incident recorded of his youth. It was after the flood, after Noah had saved the remnant of the race, after he had achieved a great place and fame for himself—after all this that he fell.

His was one of the tragedies of the middle years.

There are special vices that lie in wait to assault those years. There is, first of all, avarice.

"My idea of hell," said one of the characters in William Allen White's recent book, "is a place where every man owns a little property and is afraid that he is going to lose it."

Thousands of men pass the middle years within the scorching boundaries of that hell.

And there is the vice of pride, which goes before destruction; and of selfishness; and of hardness that is too busy to be kind.

I know of only two companions which a man should take with him into the middle years, as a bodyguard against these enemies.

The first of these, of course, is Growth.

Nothing happens to stop the men who keep their interests forever expanding. Gladstone had no drab and doubting days. His mind was always busy with fresh projects; even after eighty he began the study of a new language with all the enthusiasm of a boy.

Titian, Laplace, Michael Angelo—all these and scores of others carried into old age the fine fire of their youth, because their minds were fresh and growing.

Through the valley of the middle years Growth marched on one side of them, and on the other side a firm and steadfast Faith.

Men divide themselves into two classes at the gateway of the middle years. There is the class of those who are self-satisfied; to whom life has no more mysteries; who know that it is only a game in which the strong succeed in getting and in keeping.

Of such are the Ned Parkers of the world. Often they rise to high places; yet always we feel that somehow they have betrayed the fair promise of their youth.

And there is the second class of those who greet every hour with a reawakened wonder; to whom the goodness of each day is sufficient for it; and in whose hearts Faith murmurs thrilling words.

Among the members of this second class there are no tragedies; and happy is the man who therein finds his place.



The Signature of the All-Weather Tread

On the highways of the great round world the sharp blocks of the Goodyear All-Weather Tread have written in a universal language:

◇ *More people ride on Goodyear Tires than on any other kind.* ◇

You will find their familiar pattern in the lonely forest trail as on Fifth Avenue, in Singapore and Pekin as in Buenos Aires or Madrid, in the sands of the Sahara as on the streets of your home town.

Wherever men travel in motor cars, there will you find that tread-mark following, writing always as it goes, Goodyear, Goodyear, Goodyear.

There is more in the frank signature of the All-Weather Tread than evidence of the popularity of our product.

There is more in it, even, than the implication its bold characters publish of our responsibility for that product's performance.

In its infinite multiplication over the face of the earth, it appears as an index of the public's confidence in Goodyear Tires.

By the public it may well be taken as a pledge in the name of good business that such confidence shall be merited in each tire we build.

It has been our conviction always, that, in the tire business as elsewhere, patronage would go where it is best treated.

It has been our conviction also, that the more the user took out of Goodyear Tires in miles, the more we would take out of Goodyear Tires in sales.

We have clung steadfastly to this principle in every department of our business, and have consistently prospered in return.

It is unthinkable now that we should imperil our position by abandoning the policy that has made us.

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A House You Can Build in Installments

You live in the first section of it you put up, thus having a comfortable home while earning the money to complete it

By William F. Miller

TO BUILD or not to build—that is the question being turned over in the minds of many home-hungry families in country and town alike. "Newlyweds" in particular are confronted with the building problem.

Most persons can recall instances where the problem of building a home was undertaken more or less blindly, the result being years of dissatisfaction and discouragement. Building operations now, more than at any time in the past, require definite planning that will insure a right start and a satisfactory finish.

A hit-or-miss beginning can be counted on to furnish a shelter, but not a convenient, satisfying home. Without definite practical plans the inexperienced builder through desire for economy may find his house cramped and small as the years pass. Then the enlarging process undertaken may nearly or quite double his house-building expense.

Just as bad is the too-ambitious beginning, only to find that the completed house has swallowed two dollars where one was allotted for its construction. Finally comes an overwhelming after problem to solve—the furnishing of a number of unneeded rooms and the task of caring for them.

Here is some cheering news for home builders: When shorn of too extravagant ideas on the one hand, and mistaken economies on the other, home building need not be more difficult to-day than in the pre-war period. In some cases the advance in income will take care of the greater expense of building.

Where the need of a new home is pressing, a building plan can be used which will provide for the completion of merely a part of the house plan selected. Thus a few necessary and convenient rooms will be soon available, and when funds accumulate the remainder of the original plan can be completed without any wrecking or making-over of the part first built.

In fact, I know of a number of such piece-by-piece house-building projects where the houses were later completed without in any serious way discommoding the home life of the families concerned. And, what is fully as important, these completed houses are not out of proportion and community eyesores, such as often result from built-on and pieced-out construction.

A very good example of a house that can be built to meet present needs and later reconstructed to make it more commodious is shown on this page.

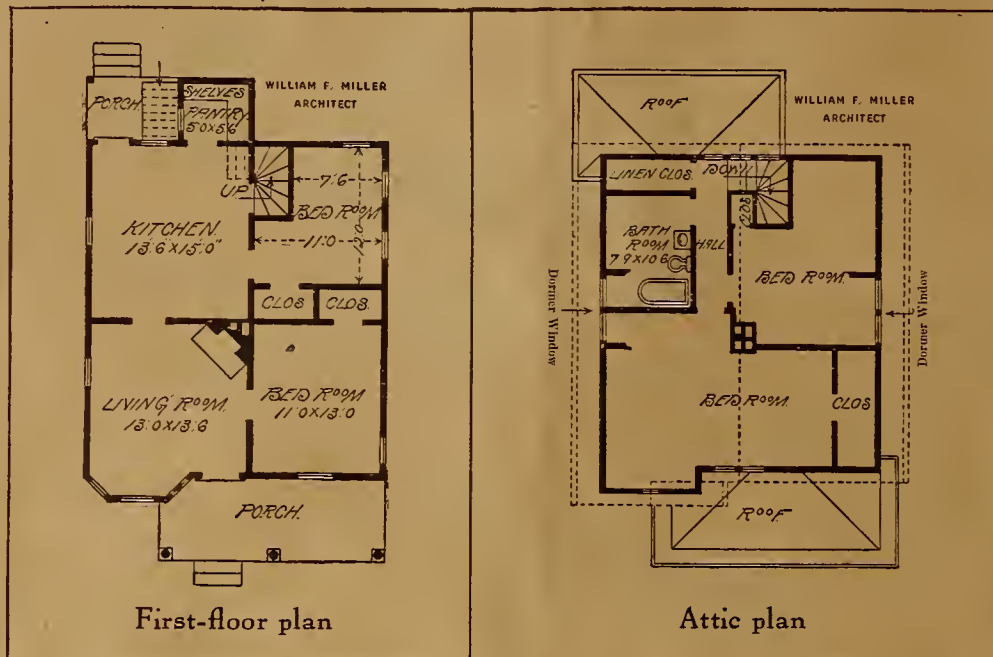
In a house of this size the living-room is made to do service as a dining-room, but most experienced housewives will agree that if the kitchen is well ordered and roomy many meals can be better enjoyed in the kitchen with much saving of labor.

The living-room as here indicated has a fireplace, and it is in the same stack with the other flues. This keeps down the expense. The room is well lighted by three windows in the bay, another window on the side, and the glass in the entrance door.

A space sufficiently large for future necessity was considered for the kitchen. A sash door leads to the rear porch, and the glass in that door and the windows in the left and rear walls provide light from two sides.

Although the building was erected with economy as the paramount thought, convenience in the most necessary places was not overlooked. For that reason a large pantry was added to the kitchen. A small porch was planned as a protection for the rear entrance and also as a cover for the exterior cellar door. Each bedroom has at least two windows placed for cross ventilation, and large closets were added for usefulness.

The staircase from the kitchen



leads to an excellent attic. The possibilities for future remodeling are worth careful study. Instead of the rafters starting, as in most expensive houses, at the floor level, they bear on a wall plate 3 feet 5 inches from the floor, and meet at the ridge 9 feet 7 inches above. That makes the total height in the center of the attic 13 feet.

A cellar with a cement floor occupies the space under the kitchen. The balance of room under the house was not excavated except for trenches. There the walls are 2 feet under the grade. All foundation walls are concrete 8 inches thick and finished above the grade to imitate even courses of rock-range work. It is my belief that the additional cost of a cellar the size of the house would be money well expended.

Hard-pine flooring was used for the first story, the attic being floored with a cheaper grade, and, except in the attic, yellow pine was the finish. It was covered with light stain and then received two coats of varnish.

Good-quality doors and windows were selected for the building from stock sizes. Especial sizes or designs always cost more than stock patterns, and from the standpoint of utility the fancy doors are no better than the others. The walls and ceilings of the first floor were lathed and

plastered and finished in white. The attic was left unplastered.

A mantel costing \$35 complete was set up in the living-room. It has facing and hearth of tile. The fireplace is equipped with an iron basket in which either coal or wood can be burned. The mantel and hearth were built for practicability as well as for ornamentation.

Three fourths of the distance across the house front is taken up by the main porch, which is 7 feet wide. To keep down the cost, a porch railing was not built. This can be added at any time at an expense of \$25.

Molded galvanized-iron hanging gutters were secured to the cornices. They are connected with the down-spouts that run into a tile drain, carrying the rain water from the roof to a cistern.

Cutting the material to eliminate waste was continually kept in mind. For that reason a plan was adopted whereby joists 14 feet long would cut to advantage on the left side of the center wall, and joists 13 feet in length would answer for the other side without useless spending of material. The studding in the exterior walls is from stock-size lengths of 12 feet. That permitted a ceiling 8 feet 6 inches for the first story, and the additional height before

described from the attic floor to the wall plate, where the roof rafters start. Rafters 2x4 inches, 16 inches on centers, form the roof construction. Lath sheathing was nailed to the rafters and the roof covered with shingles. The house was not sheathed. Heavy building paper was nailed to the uprights and then the walls were weather-boarded with double-worked tongued and grooved siding.

The exterior of the house, except the window sashes, received three coats of lead and oil, left in the original white, and the shingles on the roofs were stained dark red. All the window sashes were painted black.

In the general contract the excavation, concrete work, brickwork, plastering, cement floor in the cellar, painting and glazing, hardware trimmings, mantel, cistern, rough lumber, millwork, and carpenter labor were included. To build this house now would cost \$1,200 to \$1,300, depending on its location.

The proposed second-floor plan shows how two additional bedrooms and a store-room could be added for future requirements. The chimney, being approximately in the center of the house, will provide a flue for each bedroom if heat is desired.

Almost the entire width of the house is taken up by the chamber in front; the remaining space is occupied by a large closet. The rear sleeping-room is a trifle more than half the breadth, and it has also a closet.

The only change in the external appearance of the house resulting in the remodeling of the second floor would be a dormer window on each side. They are not only necessary but add much to the outside appearance.

In spacing the roof rafters 16 inches on centers, when the building is under construction, it simplifies the placing of the collar beams so they will work out the proper distances for lathing.

It is advisable, if the owner is reasonably certain that the second floor will be remodeled, to provide for the dormer windows when the building is being erected. Their cost would be about \$35, and would thus forestall all future work on the outside.

If the owner wants to install a hot-air furnace, the wall stacks to carry the heat to the second floor ought to be placed in the partitions of the first story as the work progresses. Their cost thus anticipated need not exceed \$15. An expenditure of \$150 will equip the entire house when remodeled with a furnace, or \$135 if the first floor only is heated. And the cost of the alterations to provide the additional bedrooms would be \$250.

With the second proposed up-per-story plan an arrangement is shown how to provide space for a bathroom. That scheme will not cost any more than the first proposed remodeling, aside from the plumbing. A complete hot and cold soft-water system of plumbing, operated by an air-pressure tank, might be enjoyed later by the occupants for an additional \$400. It would be good judgment to plan for the bathroom, even though the plumbing could not be installed at the same time.

An electric lighting plant that can be operated from the engine used for the water system will add to the comfort of the house at a cost of \$200 more. That amount will pay, at present, for a plant of 25 lights at \$125, and the \$75 will pay for the fixtures.

Along with my article the house has grown until it has bloomed into a cozy home with six rooms and a bath at a total cost of \$2,200. It occupies the same amount of square feet on the ground as originally, but it has been changed from an inexpensive cottage of four rooms to a dwelling with some of the luxuries in a house costing several times as much.



This attractive and comfortable cottage can be built for \$1,200 to \$1,300, depending on its location



Right answers to roofing questions

Here are questions that customers ask us about *Certain-teed Roofing*. Notice the answers and see if they don't cover about every question you might ask.

How does the cost of *Certain-teed* compare with shingles? The first cost of *Certain-teed* is lower than either wood or metal, and its maintenance is practically nothing.

How does *Certain-teed* compare with other roofing as to durability? *Certain-teed* is guaranteed for 5, 10 or 15 years, according to thickness. Experience shows that its actual life is much longer. Did you ever hear of a guarantee on wooden shingles?

What can you say for the weather resistance of *Certain-teed* roofing? If properly laid and cemented together, it is absolutely water-tight. The hardest rains and snows cannot drift in. Melting snows find no crevices. As it is a non-conductor of heat and cold, it helps to keep the building warmer in winter and cooler in summer. The roofing will not melt in hot weather—will not crack in cold weather. It deadens the noise of hail or rain beating on the roof.

How about *Certain-teed* in relation to fire protection? *Certain-teed* resists sparks—even burning embers have no effect upon it. It will make your buildings safe from sparks. This is a big item in choosing a roof, as you know that hundreds of barns and residences are lost by fire in your state every year.

What about the cost of laying *Certain-teed*? You can lay *Certain-teed* yourself. No skilled labor is required. Simply follow instructions that come with the roll. No special tools are needed.

Certain-teed is the right answer to the roof question in every way.

Note—It pays to keep a few rolls of *Certain-teed* on hand for emergency roof repairs. It may be the means of saving costly weather damage to your property.

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for residences come in beautiful subdued tones of red and green. These shingles have a handsome rough surface. They are so laid that three thicknesses cover the entire roof. They lay and stay flat, and will not crack nor break off in the highest wind. This is due to the very heavy saturation of asphalt in the center, which makes them cling to the roof, yet permits them to "give" from a high wind without cracking off. They will prevent fires from sparks or embers—a big item, especially where a building is not within reach of city fire service protection. They cost no more than wood shingles, and are guaranteed 10 years.

Certain-teed Paints and Varnishes are the highest quality and will give you the best results and most economical results. The name *Certain-teed* is your protection in buying. It means certainty of quality and guaranteed satisfaction.

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These "SELECTED" Farms are carefully chosen from the cream of the richest wheat and cattle country in America, to meet your special needs, by experts representing 14,000 miles of railway, whose advice, while free to settlers, is of great practical value.

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Western Canada extends a helpful hand to home seekers. Friendly neighbors—splendid schools, churches and social life—every benefit that you formerly enjoyed—await you in this wonderfully prosperous "LAST WEST."

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My Experience With Tractors

[CONTINUED FROM PAGE 9]

farm life ahead of me, I did not see where I could go wrong in purchasing a tractor. I talked to several farmers having different makes of tractors, and went to places where tractor demonstrations were held, to decide which make would fulfill my requirements the best. I decided that a 6-12, which is of two-cylinder opposed type, would be the best for what I wanted. I have used it only one season, but that is long enough to convince me that I will never get along without it, and I think it to be the most complete one-man outfit I ever saw. The few minutes required to attach this tractor to different tools I do not count when I think how handy and convenient it is for one man to handle both the tool and the tractor. Still, all the changing I have had to do so far is from the carrying trucks to the plow, which requires only about fifteen minutes and does not have to be done very often.

My tractor weighs only 3,500 pounds, and with the extra rims I got with it I can get in the field to do my work almost as soon as I can with my horses.

When it comes to plowing it's right there, short-coupled, which helps to make the draft lighter, and nearly all the weight of the tractor is on the two drive wheels, which furnishes enough weight for the power required.

After the first round is plowed the right wheel runs in the furrow, and the left wheel is then changed upward about eight inches. This is done to make the tractor run as level as possible while plowing, and does not have to be changed back when another land is started. Most people think because the one wheel runs in the furrow that the subsoil becomes packed. This is not so; the large lugs used on the wheels will loosen up more ground than the packing amounts to. Some people think too that the tractor has to be continually guided while plowing. This is not so either.

This tractor pulls two 14-inch bottom plows at a depth of 10 inches, without any trouble, unless it is when I strike a spot of hard yellow clay or black waxy ground, which I have but very little of. I have a pulverizer attachment which works the ground up good and at the right time. Another thing, my tractor never gets tired; when it gets heated up it runs better than right at the start. I averaged four acres a day plowing last spring, which I think was very good considering the rocks I had to contend with. If it had not been for the rocks I am sure I could have plowed five acres a day, and would not have to get in such big days either, as I was by myself and had quite a lot of feeding to do before going to and after coming from the field.

As near as I can tell it cost me \$1 an acre to do my plowing; but, remember, I was not plowing continually. I put some time in on the rocks. I never stopped the engine while working on them. I am trying to rid the farm of rocks, which is quite a hindrance to the use of the tractor, but so far has never cost me any more than the price of two new plowshares. Once I had one of the large gear wheels which help to drive the tractor to break for me. This delayed me only about three quarters of a day.

After the plowing is done I change the tractor back to the carrying trucks, and I am then ready to hook up to any two tools I have on the farm for preparing the ground for a good seed bed. Last spring when the ground was in good shape to put in oats, I took two three-horse tandem disks and fastened them side by side, and placed rocks on each one which equaled somewhat above the weight of the average man. I hooked the tractor to these and tried it out. This worked very well, but I do believe it pulled a little too heavy for the tractor, as I had some trouble with the clutch's slipping in spite of all I could do.

After all this work my tractor has saved at least the work of three horses and one man, and could not have been done as quick or as good.

Now comes another very important feature in favor of my iron horse which the three work horses I have and expect to keep cannot do—that is the belt work. I do not want

to run a threshing outfit or a hay baler. Such work would keep me away from home too much of the time, and I have too much to do at home for that kind of work. I had this in mind when I bought the tractor, and I am talking about the one which I still think suits the best for what I wanted. I run a four-roll husker with it, which my brothers and I bought last fall. Early last spring, before I got my tractor, I had 200 shocks of corn shredded for me, which will never happen again at that time of the year. I expect to run a silo filler next year.

I have a feed grinder which has a capacity of 25 bushels an hour, and it is a wonderful help to me. I can grind enough feed to last quite a while in the length of time it would take me to go to the mill and wait on the grinding or make another trip.

I also have a buzz saw which I put to good use now and then for myself and anyone in the neighborhood who calls on me.

My tractor and I are real pals; we both work together; when it snorts I snort, when it kicks I kick a time or two. I learn something new nearly every day I use it. I learned not long ago never to push on the crank when starting the motor, but always to pull on it, so, in case it should kick, the handle of the crank will jerk out of the hand and do no harm. Sometimes



it spits right in my face when I am trying my best to teach it better by adjusting the carburetor.

It's not all pleasure running a tractor, neither is it all pleasure working with horses. To tell the truth about it, I would rather work on my tractor than any team of horses I ever saw, but they are both on my farm to stay. I don't see how I could get along any more without either of them. Now listen, dear reader, before buying a tractor ask yourself a few questions. If you haven't a slight liking for machinery and are afraid of getting your hands black, and can't find out for yourself in a very short time where the trouble is in case anything should go wrong, and are afraid to go right after it yourself and have it fixed or newly replaced as quickly as possible, you had better still keep on using your horses.

On the other hand, if you have a liking for anything of the kind, and see that you can use a tractor on your farm, you should not hesitate in buying the kind you like best.

Anyone who buys a tractor and does not have success with it, I cannot help but believe that the trouble is in the operator and not the tractor.

After I have used my tractor for some years and it becomes worn out, I expect it to have more than paid for itself and the price of a new one.

Fourth Prize

Winner: G. A. Tibbans, Galena, Kansas

I HAVE used many kinds of tractors, such as a 12-25, 8-16, 15-30, 30-60, 20-40, 8-20, and last, but far from least, a 12-20. I am now using the latter machine. I like it for plowing.

My advice would be not to let the high

price of gasoline prevent you from buying a tractor, for you must remember that horse feed is also high. Your tractor runs up no expense account when it is not working, but your horses do.

In addition to farming the last three years, for quite a while before that I moved houses, graded, and did various other kinds of work with various kinds and sizes of tractors, both oil and gasoline. As to the relative merits of gasoline-driven or oil tractors, there is much to say on either side; but for myself I prefer the gasoline tractor, and it is this sort of machine of which I write.

Of course, the size of a tractor to buy will depend upon the size of the farm you are running. But with the tractor I am using you can easily run a pretty fair-sized farm. It will plow from 3 to 3½ miles an hour.

And with corn at its present price, and other feeds in proportion, the tractor makes a stronger appeal than ever. The cost of keeping a horse has more than doubled in the last year or so, and as a result horse labor has advanced more than tractor power. Wherever a tractor takes the place of horses it saves just so much feed, which can be used for meat and milk production or for human food.

To be sure, many tractors are in the experimental stage yet. They are sold too high for the average farmer, and he has to do more or less experimenting with them; and then he has to pay spot cash. If the engine does not make good he has to keep it just the same. Many of the manufacturers will not take a chance with the farmer, and do not stand by their guarantee unless it is written, and I have seen but few written guarantees. Usually, I think, the company gets the cash first.

Nevertheless, the tractor is the coming power on the farm. It is not a fad, but a necessity.

The tractor enables the farmer to plow his ground deep, thus turning up the fertile subsoil, which, when teams are used, is in many cases not turned up. All this I know, for I have put in many years of hard work learning it. And at harvest time the tractor means three times the number of acres of grain harvested, and at a much smaller cost, than with the old method; and after the grain has been harvested and threshed the tractor can be used to haul it to market—as many as a dozen wagons sometimes being hauled behind the engine.

Many tractor owners claim that their machines are "always out of order," need repairs continually, and so on. In many cases that is true, but it is usually caused by lack of care and attention to small points, such as oiling. From my own experience I have made a set of little rules, and I try to follow them, and anyone who does the same will have but little trouble with any good make of tractor. I have put them in the form of "don't's," for it is always because the operator "don't" do this or that, that his tractor fails him. Here they are:

Don't fill the gasoline tank while your engine is running, and don't get oil or water in your tank.

Don't fail to examine the fine wire strainer, and make sure it is free from dirt and lint when you go to put oil in the lubricator.

Don't "forget" and allow the clutch to engage suddenly. It means trouble if you do.

Don't fail to break yourself of the habit of priming the carburetor continually in warm weather.

Don't fail to disengage the clutch before shifting gears, and don't fail to have the tractor come to a full stop before you shift gears.

Don't fail to keep radiator filled with water, and don't leave water in the radiator in freezing weather.

Don't let the fan belt become loose so that the fan will not travel at full speed, and don't attempt to start the engine with the spark advanced.

Don't fail to lubricate the motor and all working parts.

Don't race the engine when the tractor is not pulling a load. There is no worse abuse.

Take good care of your tractor and it will take care of you.





A shipping platform at every farmer's gate—

THIS is the ultimate aim of the new transportation movement—the Rural Motor Express Lines—first fostered as a war measure by the Highways Transport Committee of the Council of National Defense.

Regular and dependable transportation—a thing the farmer has never had before—is now being furnished him in many sections in much the same way that the city man has his street-cars, his express deliveries, and the other forms of transportation which operate to his door.

The effect of dependable transportation is to move the shipping platform from the railway station right up to the farmer's front gate, permitting more frequent shipments both to and from the consuming market centers.

The benefits of the Rural Express—affecting alike the producer and the customer—are impossible without good roads. Schedules cannot be maintained if the roads become bogged with every heavy rain-storm.

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Tarvia is popular with road engineers everywhere because it makes firm, mudless, dustless, water-proof and automobile-proof roads that stand up under the most severe weather and traffic conditions. When properly constructed, Tarvia roads are less expensive to maintain than any other type of "year-around" road.

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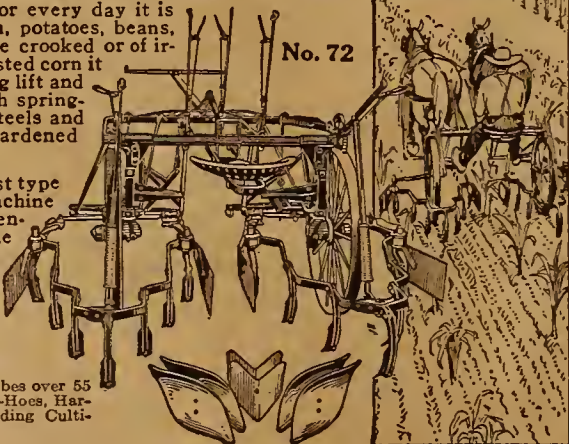
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Could You Use Five Thousand Dollars?

[CONTINUED FROM PAGE 7]

be just as easy to make a loan in a panic as in prosperity.

Even at this late date we find calamity criers who are not convinced that the system is really helping farmers. But consider a few facts: At the time the Federal Farm Loan system went into effect, of the 7,613 national banks of the country, bank records showed that 1,247 were charging farmers extortionate rates for loans. The highest charges were in Texas, Oklahoma, North Dakota, Georgia, and Alabama, although 12 per cent was considered very moderate in the Rocky Mountain section. These figures are mine, but are taken from the sworn statements of national bank examiners.

Again, consider the situation existing in the United States in 1916, when the Federal Farm Loan Act went into effect, and which to a far too great extent still exists. Just add all the loans made by all of the banks of the United States together. For every dollar loaned on farms, six dollars is loaned on city real estate. Which did the country and the world the greatest economic and humanitarian good during the last three years?

And for each \$2.50 loaned on farm lands, \$97.50 are loaned on factories. From whence do these factories draw their raw materials? Only 10 per cent of all loans made by banks were on farms.

The railroads of the country employ 2,500,000 men—the farms 12,500,000. The railroads support 10,000,000 people; the farms 40,000,000 on the farms and 80,000,000 in the towns and cities, and produce a surplus sufficient to keep Europe from starvation. Nevertheless, the railroad operator borrowed \$10 for every dollar the farmer borrowed through the regular channels.

Let us see who are the producers of this country, and then we may possibly more accurately determine who deserves support financially. The 40,000,000 farm residents of the country add \$10,000,000,000 to the nation's wealth annually; the 7,000,000 people in industry add \$20,000,000,000 to the nation's wealth; but they get one half of this from the farm, and take credit for all of it. The factory output is based on your farm production. No factory could turn a wheel without the farmer.

Haven't you a perfect right to a banking system for yourself like the Federal Reserve system for commerce and industry? If home production could not drive this need home, export trade did. In one year our manufacturers exported \$500,000,000 worth of products; we farmers exported \$750,000,000 worth of food the same year. This was for 1916.

Yes, we need the bank, and, thank goodness, we have it.

Two 5½ Per Cent Interest Tables

The following amortization tables of \$1,000 and \$2,000 loans at 5½ per cent interest in semi-annual installments are given to show how federal farm loans are amortized, or "killed off," in 69 payments. By having such a table printed on the back of each borrower's note he is enabled to know at a glance what his next payment should be, thus making his bookkeeping of the matter practically automatic.

It may be seen in a few minutes of figuring how the average rate of interest covering the period of 34½ years is reduced to 3 6-10 per cent by the reduction of the principal through amortization.

PRINCIPAL \$1,000. RATE 5½ PER CENT.
SEMI-ANNUAL INSTALLMENTS \$32.50.
FINAL INSTALLMENT \$32.42

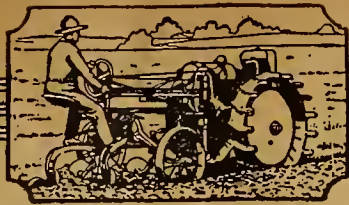
AMORTIZATION TABLE

No.	Interest.	Principal.	Balance.
1	\$27.50	\$5.00	\$995.00
2	27.36	5.14	989.86
3	27.22	5.28	984.58
4	27.08	5.42	979.16
5	26.93	5.57	973.59
6	26.77	5.73	967.86
7	26.62	5.88	961.98
8	26.45	6.05	955.93
9	26.29	6.21	949.72
10	26.12	6.38	943.34
11	25.94	6.56	936.78
12	25.76	6.74	930.04
13	25.58	6.92	923.12
14	25.38	7.12	916.00
15	25.19	7.31	908.69
16	24.99	7.51	901.18
17	24.78	7.72	893.46
18	24.57	7.93	885.53
19	24.35	8.15	877.38
20	24.13	8.37	869.01
21	23.90	8.60	860.41
22	23.66	8.84	851.57
23	23.42	9.08	842.49
24	23.17	9.33	833.16
25	22.91	9.59	823.57
26	22.65	9.85	813.72
27	22.37	10.13	803.59
28	22.10	10.40	793.19
29	21.81	10.69	782.50
30	21.52	10.98	771.52
31	21.22	11.28	760.24
32	20.91	11.59	748.65
33	20.59	11.91	736.74
34	20.26	12.24	724.50
35	19.92	12.58	711.92
36	19.58	12.92	699.00
37	19.22	13.28	685.72
38	18.86	13.64	672.08
39	18.48	14.02	658.06
40	18.10	14.40	643.66
41	17.70	14.80	628.86
42	17.29	15.21	613.65
43	16.88	15.62	598.03
44	16.44	16.06	581.97
45	16.01	16.49	565.48
46	15.55	16.95	548.53
47	15.08	17.42	531.11
48	14.61	17.89	513.22
49	14.11	18.39	494.83
50	13.61	18.89	475.94
51	13.09	19.41	456.53
52	12.56	19.94	436.59
53	12.01	20.49	416.10
54	11.44	21.06	395.04
55	10.86	21.64	373.40
56	10.27	22.23	351.17
57	9.66	22.84	328.33
58	9.03	23.47	304.86
59	8.38	24.12	280.74
60	7.72	24.78	255.96
61	7.04	25.46	230.50
62	6.34	26.16	204.34
63	5.62	26.88	177.46
64	4.88	27.62	149.84
65	4.12	28.38	121.46
66	3.34	29.16	92.30
67	2.54	29.96	62.34
68	1.71	30.79	31.55
69	.87	31.55

PRINCIPAL \$2,000. RATE 5½ PER CENT.
SEMI-ANNUAL INSTALLMENTS \$65.
FINAL INSTALLMENT \$64.84.

AMORTIZATION TABLE

No.	Interest.	Principal.	Balance.
1	\$55.00	\$10.00	\$1,990.00
2	54.73	10.27	1,979.73
3	54.44	10.56	1,969.17
4	54.15	10.85	1,958.32
5	53.86	11.14	1,947.18
6	53.55	11.45	1,935.73
7	53.23	11.77	1,923.96
8	52.91	12.09	1,911.87
9	52.58	12.42	1,899.45
10	52.23	12.77	1,886.68
11	51.88	13.12	1,873.56
12	51.53	13.47	1,860.09
13	51.15	13.85	1,846.24
14	50.77	14.23	1,832.01
15	50.38	14.62	1,817.39
16	49.98	15.02	1,802.37
17	49.56	15.44	1,786.93
18	49.14	15.86	1,771.07
19	48.71	16.29	1,754.78
20	48.26	16.74	1,738.04
21	47.79	17.21	1,720.83
22	47.22	17.68	1,703.15
23	46.84	18.16	1,684.99
24	46.34	18.66	1,666.33
25	45.82	19.18	1,647.15
26	45.30	19.70	1,627.45
27	44.76	20.24	1,607.21
28	44.19	20.81	1,586.40
29	43.63	21.37	1,565.03
30	43.04	21.96	1,543.07
31	42.43	22.57	1,520.50
32	41.81	23.19	1,497.31
33	41.18	23.82	1,473.49
34	40.52	24.48	1,449.01
35	39.85	25.15	1,423.86
36	39.15	25.85	1,398.01
37	38.45	26.55	1,371.46
38	37.71	27.29	1,344.17
39	36.97	28.03	1,316.14
40	36.19	28.81	1,287.33
41	35.40	29.60	1,257.73
42	34.59	30.41	1,227.32
43	33.75	31.25	1,196.07
44	32.89	32.11	1,163.96
45	32.01	32.99	1,130.97
46	31.10	33.90	1,097.07
47	30.17	34.83	1,062.24
48	29.22	35.78	1,026.46
49	28.22	36.78	989.68
50	27.22	37.78	951.90
51	26.18	38.82	913.08
52	25.11	39.89	873.19
53	24.01	40.99	832.20
54	22.88	42.12	790.08
55	21.73	43.27	746.81
56	20.54	44.46	702.35
57	19.31	45.69	656.66
58	18.06	46.94	609.72
59	16.77	48.23	561.49
60	15.42	49.56	511.93
61	14.08	50.92	461.01
62	12.67	52.33	408.68
63	11.24	53.76	354.92
64	9.76	55.24	299.68
65	8.24	56.76	242.92
66	6.68	58.32	184.60
67	5.08	59.92	124.68
68	3.43	61.57	63.11
69	1.73	63.11



Every Moline-Universal Tractor Must Give Satisfactory Service

When you buy a Moline-Universal Tractor the transaction does not end there. In addition you buy Moline Service—which is service that satisfies. This means that with intelligent operation you will be able to keep your tractor working to full capacity during its entire life.

Moline Service means exactly what it says—and we have perfected an organization which enables us to furnish Moline Service that satisfies. We can do this because:

1. Twenty-three Moline factory branches in all parts of the United States carry stocks of repairs and complete machines—in charge of an expert service department.

2. Factory branch territories are sub-divided into service territories each in charge of a resident Moline Service Supervisor—whose sole duty is to see that Moline Service is properly and promptly furnished in his territory.

3. Every Moline Tractor Dealer is required to carry Moline-Universal Tractor repairs in stock and have a competent service department to provide prompt and efficient service.

4. Tractor schools of short duration in charge of expert instructors are being held in co-operation with Moline Tractor Dealers, to instruct farmers in the care and operation of Moline-Universal Tractors. These schools will continue to be held as long as there is a demand for them.

5. With every Moline-Universal Tractor we furnish a complete instruction book, giving full information on care and operation of the tractor.

6. Moline-Universal Tractors are simple in construction, have the best materials and workmanship money can buy, and all working parts are quickly accessible.

Therefore we are prepared to back Moline Service to the limit and you are sure of getting constant and satisfactory work from your Moline-Universal Tractor.

If any Moline-Universal Tractor is not giving its owner satisfactory service we want to know about it *immediately*.

The Moline Plow Company leads the Tractor industry—first, in developing and perfecting the original two-wheel, one-man tractor which does *all farm work including cultivating*, and again in announcing a service plan which makes a “booster” of every Moline Tractor owner.

Join the throng of “Moline Boosters.” You will be able to do twice the farm work at half the expense. See your Moline Dealer now or write us for full information.

Moline Plow Company, Moline, Illinois

Factory Branches At:

Atlanta
New Orleans
Dallas
Oklahoma City

St. Louis
Poughkeepsie
Baltimore
Los Angeles

Stockton
Spokane
Portland
Salt Lake City

Denver
Kansas City
Omaha
Minneapolis

Minot
Sioux Falls
Des Moines
Bloomington, Ill.

Indianapolis
Columbus, Ohio
Jackson, Mich.

Service That Satisfies

HARDMAN TIRES

TWENTY-FIVE years of building "good will" with a tire—that the most conscientious dealer could sell strictly on its merits—at full price.

That is our history.

We have never had any difficulty selling our output, no trouble getting dealers. Because dealers everywhere believe in our honesty of purpose, and the riding public has confidence in the product—from the time the first tire is bought.

Now, however, the addition of a modern equipped new plant has increased our production to a point where we can safely invite new distribution by advertising.

So, we have entered upon a campaign of frank, honest publicity that we may serve a more extensive circle of car owners and at the same time make a market for the greatly increased production which our new factory makes possible.

We respect the dealer's right to a legitimate profit and our policy permits nothing to infringe upon that right. At the same time we expect the dealer to protect our rights and to deal fairly with the users of our tires. Therefore, we will not base our judgment of a new dealer merely on the number of tires he is willing to stock.

Each Hardman tire has its standard retail price. That price is the same to all buyers, because each

Hardman tire is a standard of value. Value just as definite as the coin of the realm.

One of the greatest evils of the tire industry has been the tendency to cut prices.

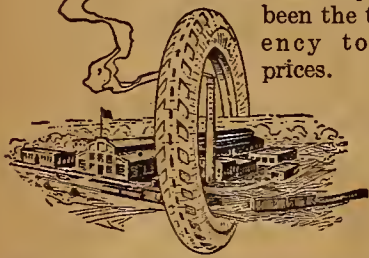
But price cutting hurts the dealer first—by shearing his legitimate profit. It hurts the jobber—in the same way—and so on until it reaches the manufacturer where it forces skimping in the quality of the tire itself or in the service that should necessarily be rendered with it.

But, most of all, it hurts the consumer—the buyer of "cut price" tires. Because it is to meet his demands that the manufacturer lowers his standard of quality to a point where he can give the middlemen, the jobbers and the dealers a sufficient margin—ample leeway to cut as low as any other dealer wherever competition is to be met. *Cut price tires are made to be sold at cut prices.*

We are pioneers of the tire industry, and the quality of our product has improved steadily from its birth. We have proven to our own satisfaction and to that of present Hardman dealers that it is still entirely possible for a manufacturer to make and sell tires of strictly first quality on the same sound basis that obtains in other lines of industry.

Hardman tires have no special "features." The manufacture of our tires embraces all the good features of tire construction, quality of materials being the first consideration; perfect process, second; inspection, third. Those three "features" being right it matters little what else is added.

Hardman Rubber Corporation
New Brunswick, N. J.



HARDMAN TIRES

**1200 T01 BEAN.**

A Gigantic Wonder—over 200 pods have been grown on a single plant—all well filled, producing over 1200 beans from 1 bean planted. Plants grow strong and erect, branching out in all directions, bearing pods up well from the ground, which literally load the plants; beans being pure white and of best quality.

Plant in your garden or any good soil, after danger of frost, any time up to June 15 only 1 Bean in a hill, and it will mature a crop in about 80 days, ripening very evenly, and the growth and yield will simply surprise you. My supply is limited and I can offer only in sealed packets, each containing over 60 Beans with growing directions. Order early to be sure of them.

Sealed packets 10 each; 3 pkts. 25c; 7 pkts. 50c; 15 pkts. \$1 postpaid. My New Seed Book is filled with High Grade Garden Seeds at lowest prices. It's mailed free. F.B. MILLS, Seed Grower, Dept. 41, ROSE HILL, N.Y.

No Punctures No Blowouts

THE Tire Filler Era has arrived. You can be rid for all time of the delays, expense and inconvenience of air filled tires. ESSENKAY has solved the tire problem. ESSENKAY eliminates punctures, blowouts and tire troubles. No air is used, hence no inner tubes are required. No spare tires, no tubes, pumps or jacks are needed. Tires give from 2 to 5 times more mileage with ESSENKAY than with air. You can drive anywhere, with perfect peace of mind.

Over 75,000 Users

Rides
Like
Air

Essenkay
A TIRE FILLER

Doubles
Tire
Mileage

NOT A LIQUID

First Cost—Last Cost. ESSENKAY contains no rubber, yet it has all of rubber's advantages, none of its disadvantages. As tires wear down to the last layer of fabric and are discarded, the same ESSENKAY can be transferred to new casing. ESSENKAY should last as long as your car.

Free Trial Offer. We will send ESSENKAY for Free Trial on your own car. Test it over roughest roads. Give it hardest trials under all conditions. If you are not satisfied that it rides satisfactorily—that it will end all tire trouble and double tire mileage—the test will cost you nothing. Write for free trial offer and booklet, "The Story of Essenkay."

DEALERS: Write for proposition in open territory

ESSENKAY is Guaranteed against being affected by heat, cold, water, mud, friction, atmospheric or climatic conditions, hardening, crumbling or flattening.

THE ESSENKAY PRODUCTS COMPANY
92-220 West Superior Street Chicago, Illinois
Member American Tire Filler Industry (Inc.)

**How I Succeeded When Others Failed**

[CONTINUED FROM PAGE 8]

framed so sturdily of oak and chestnut, and designed to shelter generation after generation, now abandoned and given over to decay. Their windows were gone, the doors were missing, the shingles were warped, and the paint had long since disappeared.

Not a step was taken in finding our home that Irene and I did not talk over as true partners. The old houses appealed to her. She wanted a home that could be restored to its dignity and grace, a genuine Colonial house. My interests were naturally centered on the land, the character of the soil, the possibility of reclaiming it, the accessibility by road or railroad.

At last we found the right combination, and the price was low enough: a thousand acres including level land and wooded hills within a few miles of a quiet little town on a branch railroad.

The house was a sight that would have discouraged any but the young and ambitious, for, though it had splendid lines and had been built to last for centuries, its latest tenants had been shiftless and unappreciative housekeepers, who allowed the fine old place to become very seedy. It needed repairs, it needed paint, it needed cleaning. Heavens, what a cleaning we gave it!

Then began the happiest period of our lives. The home was Irene's kingdom, the fields mine, but we advised and helped each other out in our respective domains. The purchase of the farm had left us with little surplus capital and help was hard to get, so I helped her with the house painting and renovating, which we made livable room by room.

In return she gave me a hand at the outdoor work, hoed the potatoes, and raised garden truck. It was hard work, though for us it was not drudgery. It was a game; and the game was worth while, for the stake was man's dearest possession—a home, a fireside.

Aside from the big job of reclaiming the land, there was the equally important problem of just what to raise and how to market it to the best advantage. It was to be corn, of course; but there are different kinds of corn, and a sort which does well in one part of the country may be a failure in another.

I studied the market, and decided that the variety producing the finest johnny-cake would be the most profitable. I had some ideas about exploiting johnny-cake, and I did not hesitate to pay fancy prices for seed. We could economize in some other direction, but for seed the best only was good enough.

In the West I had learned a great deal about modern farming implements, and that knowledge was of value in Rhode Island, where the cream of the labor is drawn into the mills. By securing labor-saving machinery I was able to get along with the least possible hired help, and the investment was a paying one, for the labor problem on the farm grows more acute year by year. Having spent my hard-earned money on implements, I naturally took the best possible care of them, and saw that they were kept clean and oiled and sheltered from the weather.

Adopted Up-to-Date Methods

The success of my first crop on the old "run-down" farm astonished my neighbors. They began to feel that there might be something in the notions of this young stranger who was doing things that they and their forefathers had never thought of. But I missed no opportunity to study the methods of the farmers around me, adopting such of their ideas as were good, and discarding those that they followed merely from tradition or force of habit. We became friends, joined the Grange, and took part in all social activities.

The crop was good, but that is only the second act of the farmer's yearly drama. The thrilling climax of the third act of the play is getting a good price for the crop. I saw no point in working hard and spending energy and thought in making profits for a middleman.

Over this point my wife and I consulted many times, and finally decided that it would be a safe venture to start a little mill. Waterpower is plentiful through that section, and machinery for a small mill was not beyond our resources and credit, so an inexpensive little building was set up by the dam in the nearest village, and equipped. As a matter of course, I studied up the problems of machinery and milling

processes, pretty thoroughly before taking this step, and had decided just how the meal was to be marketed.

There were two ways to go about it: I could produce a first-class meal and sell it in bulk at a few cents a pound, getting only a small margin above the additional cost, or I could capitalize the excellence of my product, which I had worked so hard to secure, and market my johnny-cake meal in packages bearing a trade-mark.

We talked the matter over, and decided that, although it would cost a little more to pack and seal and label our product, it would pay well in the long run. The discussion of details often led to excellent ideas.

The marketing of our packages was very interesting work. As we were putting up a select grade for the highest class retail trade, we formed connections with the largest groceries that cater to people of means in Providence and other cities. With my little car it was possible to handle the commercial details and deliver the goods myself, and Irene and I combined pleasure with business in our trips from the farm to the cities.

Demonstrations and Exhibits Helped

It was not enough merely to put a package of johnny-cake meal into the hands of the leading grocers: the buying public had to be awakened to the fact that our meal was to be had, and that the johnny-cakes baked from it were of the finest flavor. So we made it a point to be represented at pure-food shows and fairs, and even conducted demonstrations in a big department store. Of course, our stage training was helpful in such personal salesmanship, but the principal factor of our success in convincing people was that we had faith in what we sold. Advertising campaigns were planned, and here again my wife's ideas put the message across in original and effective style.

There is no mystery about advertising. Experts say that it is simply telling the truth in a forceful manner, with plenty of repetition to drive it in.

At any rate, our descriptions of the johnny-cake meal and the recipes that made you fairly hungry to read them brought results, and it was not long before we were getting as many orders as we could take care of. Quite a small mail-order business was developed with individual buyers, and this, together with the book-keeping, was handled by my "leading lady," who found that her schoolgirl aversion for arithmetic gave way to genuine interest when the figures represented the profits of our business.

The adventure which we entered upon several years ago has justified itself. Recently I found the business had grown so rapidly that a larger mill would be required, and this has been built and put into operation. The old house, which was a blot on the landscape when we first saw it, is now a pleasant country home with white walls and green shutters, the quaint well sweep in the front yard marking it for the Colonial structure that it is, for we have retained all the distinctive qualities of the period when it was built. We have renovated the interior room by room, and brought it closer every year to the ideal that we had in mind when we first decided to enjoy a real home after the camp life in strange hotels. With a log burning in the big fireplace in the living-room, and the light reflected in the eyes of my wife and the sunny hair of my little girl, I feel that I struck a good bargain with life when I exchanged a career on the stage for this.

For we have sacrificed very little that was worth while. The isolation of the farm of other generations is a thing of the past. Our little car makes the life of the city very accessible, and whenever we want to see a play or hear a concert or run down to some seaside resort it is a matter of no difficulty. We read the same books, subscribe to the same magazines, and discuss the same subjects of current interests as our city friends do, and perhaps we have more time for reading and more quiet for thinking than those who live the nerve-racking life of the metropolis. Our time is well filled, but not crowded, and there is a pleasant variety to our work—enough outdoor work to keep us both fresh and vigorous, and enough indoor work and study to keep our minds alert. I have never regretted coming back to the farm. And I shall never leave it.



The Linwood "Six-39"
5-Passenger—\$1555.

PAIGE

The Most Beautiful Car in America

Pay Enough to Secure Satisfaction

There are just two spendthrifts—the man who spends too much and the man who spends too little. Both are grossly extravagant and both are deluded by the same error—a false sense of values.

But there is this distinction.

The man who *over-spends* can probably afford it, whereas the man who *under-spends* cannot. For, after all, the seventy-five dollar suit of clothes is a perfectly tailored all-wool garment and worth at least half of its price.

The fifteen dollar suit is "sweat shop" cotton and a sudden shower proves that it is worth exactly nothing.

And so it is with a motor car or any other manufactured product.

You must pay *enough* to secure *satisfaction*—no less. You must convince yourself that the basic materials and workmanship are all right.

You must be sure that the car *answers your requirements* from the standpoint of size, power, design, comfort and general efficiency. No other car will satisfy you. No other investment will be economical.

This is our sincere advice as builders of a quality product. This is the advice that you would receive from every Paige owner in the land. Think it over.

The Linwood "Six-39" 5-Passenger—\$1555 f. o. b. Detroit

The Essex "Six-55" 7-Passenger—\$2060 f. o. b. Detroit

PAIGE-DETROIT MOTOR CAR COMPANY, DETROIT, U. S. A.

Why Dogs Leave Home



NOTE the expression of disgust on Rags' face. No lady has any desire to live in a house perfumed by a—well, a pole-cat. Thinking she had found a secluded place to gnaw her bone, Rags experienced the surprise of her life. And she is losing no time getting out.



Fox Film Corporation

TAILS were made to wag, and not to pull. Rover has been a patient victim to this healthy child's gentle ministrations since breakfast—long hours ago. He has been a horse, a football, a captive German, a circus lion, a wrestling partner, and a saddle elephant. Now he is posing in a living picture as "The Power of Resistance." There are limits, however, even to a dog's life. The minute his tail is released Rover is going to stage the "Flight into Egypt," all by himself.

ART is art, but when one has to sit in the gold-and-ivory bedroom of an actress while she lies in bed in a houdoir cap and reads her press notices out loud, it's high time to seek another studio. "Listen to this one," says June Caprice while Haggis wonders wistfully just what he's going to tell the missus. Confidentially, he informs us, he would much rather be out chewing up a tough burglar, sampling the ear of a fighting brother, or chasing cats.



MUSIC hath charms to soothe the savage beast. Also to arouse it, if it's a burn music. Here is a case in point. This dog should be decorated with the distinguished service cross. He is listening to his master learning to play the guitar. Being a dog, he is faithful to the last. (You will note that everyone else has departed.) And being a Russian wolfhound, he probably wishes he were back in Russia, in spite of the revolution. The Red Terror is no worse than a practicing musician.

YOU remember the old poem that begins, "The owl and the pussy-cat went to sea in a beautiful pea-green boat." Well, this is the same idea. Harold ran away from home to be a sailor, and old Bowser came along with him. Bowser's sea legs are not so good, but he wanted to do his hite. His record so far has been one intruding visitor, a stray chicken bone, and a strange dog. You see him here doing his trick as the watchdog.



Photograph by Paul Thompson

RED CROSS dogs thrive on the battle-field, and learn to love the sound of heavy guns. This colie has been decorated by Prince Henry of Holland, but he never let the fact interfere with his efficiency.



Photograph from Harry F. Blanchard



Metro

THERE is no accounting for tastes, as the old woman said when she kissed the cow. But it does seem as though this lady could find a man of sufficient ugliness on whom to lavish her affection. Perhaps she has found him. And perhaps he has a lot of money and she's marrying him for that, and just practicing up an affectionate attitude on the dog. It's an old stunt, you know, this trying it on the dog. That's why dogs leave home.



HAD the lady fishes of popped tub, she herself to cats, scordion being washed. The doorknote Mildred was ing her pet, and stay. If your feels natural, aunt's paw getting turn on. He'll be sure to do the rest of your rest.



Universal Film Co.

TOBY—he being that woolly white spot under the young lady's arm—didn't exactly leave home. He was dragged. And he had only arrived there via the stork route a few weeks previously, and was quite comfortable where he was, thank you. He could roll on the floor, bark at the cat, chew the tablecloth, wiggle his nose, and everything. But visits must be made. One must keep up one's social connections, whatever happens. And Toby is not the dog to shirk his duty. All he asks is that there be an abundance of milk where he's going.



Photograph from Jeanie Tarbox Brels



SYMPATHIZE with Toto, who is posing in the borrowed apparel of the little girl's baby sister. This picture is to be printed in the "Furred and Feathered Friends Magazine." Doesn't he look pitiful? He feels just the way you do when your wife drapes her half-finished dress on you to see how it hangs. Every year photography claims thousands of innocent victims like Toto. And now we know the meaning of that old familiar phrase, "She led him a dog's life."



JULY 1st will have no terrors for "Bill." He's the white one with the chain on. The other dogs there are old boozers—heer, wine, and whisky bibbers. But not Bill. All efforts to get him to tiddle anything stronger than grape juice have failed. Not only that, but shortly after he was dragged into the saloon for this picture he disappeared, and hasn't been seen since. Of course, we don't know, but judging from Bill's actions his last name must be Bryan.

Do Your Wife and Baby Get a Square Deal, Mr. Farmer?

By Anna Steese Richardson

PERHAPS we should start with better doctors!

At least one of my friends holds that view, for, after reading a newspaper article which commented on the fact that the rate of infant mortality is higher in country than in city communities, she wrote me thus:

"As the wife of a successful farmer who has had a normal school education, and who can boast of three fairly healthy children, I resent these repeated insinuations that the farmer's wife is a less efficient, a less intelligent mother than the city woman. The city woman has no excuse for not having healthy children. She has every facility for education for motherhood. She has leisure and help in caring for her babies. And from the next block, or the other side of the town at most, she can call one specialist when her babies are born and another when they are sick. Here in our neighborhood we have no specialist in bringing babies into the world, nor planning their diet after they are born. Our doctors take 'baby cases' only because if they refused they could not hold the family practice.

"For my part, I am tired of being scolded by statisticians, social workers, health-board cranks, and writers whose knowledge of country life is limited to a suburban cottage and a visiting gardener. City mothers have every advantage over us, and we farm women cannot have better babies until we have better doctors."

As a woman who has worked on a farm, helped to hold down a claim in the Far West, and raised babies in a community where the average citizen as well as the local doctors believed that babies were born strong or weak, to live or die as Providence saw fit, where parental care, antiseptic attendance for the mother in confinement, and preventive medicine in rearing children were about as scarce as springs in an Arizona desert, I understand the rebellion of her spirit.

Which is why the Editor of FARM AND FIRESIDE has asked me to write, as one country woman to another, on how we can work together to overturn the very conditions described by our justly rebellious correspondent.

We human beings, men or women, usually get out of life just what we demand of it. And we get nothing for which we do not ask. Sometimes we must go further, and fight for it. The moment we mothers demand better care in bearing children, and a higher degree of intelligence from the physicians who advise us concerning the diet of our young children, doctors will begin to take us and our child-raising problems more seriously. But so long as we regard a successful confinement and a healthy baby as a fortunate "accident," and illness and death as the visitation of Providence, instead of neglect on the part of the mother, nurse, or doctor, just so long will physicians continue to specialize on saving lives of those stricken in later years.

All this is purely the law of supply and demand. If you do not demand high-grade goods of your general store, your local merchant will give you what you accept—"seconds." Your local physicians will not specialize in obstetrics and pediatrics, which in plain mother English mean confinement and infant ailments, care and feeding, unless you are ready to buy and pay for expert service.

Therefore we must start with the belief that the time to act is before the baby is born, on the day of its birth and during the first weeks of its life, when the foundations of the child's health are laid and the strength of the mother conserved.

Let us consider first just what the farmer and his wife, however detached their farm, can do to insure stronger mothers, healthier children, and better doctors to America.

Every year, according to U. S. Government statistics, 16,000 women pay the supreme penalty for bringing a little child into the world. In dying they leave 16,000 homes, husbands, and children desolate. Their loss to the nation is beyond computation in dollars and cents. Yet a very large majority of these mothers would not die if they had the proper care before and during confinement, if husbands and

wives insisted that doctors and nurses fight infection with aseptic treatment.

Each year, according to the same statistics, 300,000 children under five years of age die from diseases which in large measure are counted as preventable. In 1916, according to the Bureau of Census, 101 babies out of every 1,000 born alive died before completing the first year of their lives. In New Zealand, only 50 babies out of every 1,000 born alive die during that critical first year. American mothers lose twice as many babies under one year as New Zealand mothers.

Why?

Because New Zealand mothers have better care and better education in motherhood.

In a box on page 31 are more statistics, the sort which worry the friend who wrote the letter at the head of this article.

What do these figures tell you? Look at the percentages and compare them.

Take babies who die during the first day, practically at birth: In the city, 14.7 per cent; in the country, 17.4 per cent. Under one week: City, 30.2; country, 34.3. Under one month: City, 43.4; country, 49.2.

So far, up to the end of the first month, the country baby and his mother have the worst of it—the baby is more apt to die.

Now figure the later months. Three to five months: City, 16.6 per cent; country, 15.2 per cent. Six to eight months: City, 13.3; country, 10.7. Nine to eleven months: City, 11.0; country, 9.

What does this prove? Simply this: That the country mother is more apt to lose her baby at a very tender age, within one day, one week, one month after birth, than the city mother. But if the baby survives that first critical month the country mother has the better child

during the balance of the year and a better chance of rearing it.

Can you not tell the reason?

Because before, during, and after confinement the city mother has better care, and therefore a better baby, than the country mother. When the country mother regains her strength, when she has recovered from overwork, lack of prenatal and obstetrical care, when she has regained her grip on herself, body and mind, she can take care of her child properly and make the real fight for its life.

There is just one way to even up those averages, to save the country mother's babies as we save the city mother's babies—and that is by giving the country mother the square deal which my correspondent demands, strength for the mother, better doctors, the right sort of care before, during, and immediately after confinement.

You can see for yourself, Mrs. Farmer,—and incidentally your husband is going to see it too,—every argument on this subject leads back to just one point—prenatal care.

Let us balance the advantages of city and country mothers:

The city wife can command the best

medical care for herself and her child. If she cannot pay the fee of a specialist, she can fall back on the free ward of a hospital when her baby is born, or she can consult specialists in charge of a free clinic if her baby of one month, six months, or nine months is ill.

She can attend free lectures on prenatal care, and infant care and feeding.

She can secure help in her household duties if her husband can afford it.

If her baby must be raised on a bottle she can buy certified milk free from germs and feel safe in feeding her child.

She has fewer household duties, therefore she can give more time and attention to the health of herself and her child.

The country mother has her advantages too:

She commands pure air for her child. This is an important factor. The U. S. Children's Bureau offers the proof that Manchester, New Hampshire, it was found that the infant mortality rate among babies in homes fronting on evil-smelling alleys was 227.6 per cent as against 159.4 per cent for babies living in homes which fronted on nice, clean streets. Just the difference between cleanliness and dirt, pure air and foul—68.2 per cent.

The country mother can control the ventilation in her home and its temperature. The city mother fights heat in summer, and irregular temperature from steam heat as supplied by incompetent janitors in winter.

The country mother can be assured of the milk supply if her husband's cows are examined regularly by state officials and the milking is clean.

The help problem on the farm is always serious, and the farm mother can meet it only by simplifying her work.

The country mother cannot attend public health lectures, perhaps, but she can secure without price the sum and substance of those lectures in the form of bulletins issued by federal and state governments.

So, in striking the balance, we find that the most difficult aid for the country mother to command is proper medical care before, during, and immediately after the birth of her baby.

Therefore, let us start with this vital factor in saving the lives of mothers and children—prenatal care.

The Children's Bureau at Washington maintains that three fourths of the deaths during the first month of life are related to the mother's condition before the child is born. Many more can be traced to conditions surrounding the mother during and immediately after the baby's birth.

To learn how such losses in human life can be reduced by proper surgical and medical care, take a backward look. Your grandmother and mine feared just one ailment of child-bearing—child-bed fever, or puerperal sepsis. In their day no one knew its cause or prevention. Then a great physician announced the discovery that it was carried from patient to patient, from one young mother to another, by attending doctors and nurses. It was a germ disease. That was why in certain localities they had epidemics of puerperal fever which swept scores of young mothers into eternity.

At first, doctors fought the theory, but eventually accepted it, and began to fight the germ with perfect cleanliness and antiseptics. To-day, only one mother dies of this trouble where before 1850 fifteen or twenty were sacrificed to ignorance and carelessness.

If the death rate in child-bearing can be so reduced through proper care along a single line, think what can be done for country mothers if they will unite for better obstetrics, better nursing, better prenatal care!

If you country mothers were to move to town, and tell one of your new neighbors that you expected to bring a little child into the world in four months, six, seven, or eight, your neighbors would ask you what doctor and hospital you had selected? Yes—as early as that.

The city woman has been educated to take care of herself so well during the months of waiting that she has no fear of the supreme [CONTINUED ON PAGE 31]



"I had the right care"



Photo W. F. Miller & Co.

A baby ambulance in New England

We Hate Folks Who Scold Farmers

IT'S a ticklish business for anyone to tell a man how he ought to treat his wife. And we're not going to do it. We know that you have the best interests of your wife and children at heart, and that if they need better care and more consideration in those critical months before and after child birth all you need is to be convinced of that, and they will get it. We feel that the facts in Mrs. Richardson's very human and valuable article speak for themselves, and we have no comment to make. We hate people who spend their lives preaching and scolding, anyhow.

THE EDITOR.

A Smiles Social

By Emily Rose Burt

AT THE door of the parish house, as well as in the post-office window, appeared a poster adorned with one of those big smiling faces such as children draw by making a circle and putting inside it two eye dots, a nose line, and a cheerful mouth curve.

Beneath it the invitation urged everybody to come to a Smiles Social, wearing a smile and bringing an extra one in the pocket—admission, one smile!

The parish-house parlors were decorated with all the laughing or smiling pictures that could be found by the committee in charge. "Mona Lisa" was there with her crutable smile, "The Laughing Cavalier," as well as other famous characters, such as smiling ladies on calendars and magazine covers. An amusing display of newspaper cartoons also filled one portion of the wall space. Smilax was appropriately enough used for general garnishing. At the door was stationed a smiling admission collector who insisted on an entering smile from everyone. The extra smile was not demanded at this point.

With such a beginning and the gallery of smiles around the room to break the ice, the social was well started on the success that followed.

The first stunt tried was called "Throwing Smiles"—not a new amusement, but always a fun provoker. One person starts the game by smiling broadly and then pretending to wipe off the smile and throw it to somebody else. As soon as it lands on the next person's face that person must in turn wipe it off and fling it at a third player. Immediately after the smile is wiped off, the donor of it must maintain a perfectly sober expression. The company was in paroxysms of laughter before this game had gone very far.

Another amusing game for a large number, which goes under various names, was called on this occasion "Fun versus Frowns." For this the company was divided into two groups lined up opposite each other. Someone was appointed to stand between the two lines with a soft hat in hand.

If, upon being tossed into the air, the hat landed right side up, one group had to laugh while the opposite line remained absolutely sober. When the hat landed upside down, the first group remained solemn and the other group laughed. A member of either side who failed to follow this rule was penalized by having to go over to the opposite side. The line which

won all the members from the other side was announced victorious.

The old-fashioned game of "Poor Pussy" was also played with much enjoyment, the point of it being, of course, that everyone tries to keep from smiling. A circle is formed and the person inside the ring, who is "IT," takes the part of "Poor Pussy," kneeling before some person in the circle and meowing appealingly, three distinct times. Each time the person so addressed must calmly or sternly—but never smilingly—answer "Poor Pussy." In case of a smile or a laugh, this guilty person automatically takes the place of "Poor Puss."

Midway of the evening the extra smiles were asked for. These were jokes, funny rhymes or sayings, clipped from papers or magazines or, at any rate, written down, and read in turn. If various persons dislike the publicity of such a procedure, all the "smiles" may be collected and presented by two or three clever persons in the guise of minstrels. The show can be called "Smiles in Black and White."

The very popular song "Smiles" was in order, as well as the older favorite, "Pack Up Your Troubles in Your Old Kit Bag and Smile, Smile, Smile!" Humorous recitations and others relating to smiles and laughter and good cheer were rendered by some excellent local talent.

This conundrum was also propounded: What is the longest word in the English language?

The answer is "Smiles—because there's a mile between the first and last letters."

Just before the refreshments came a smile-measuring contest. All persons who wished to enter it—and some who didn't—stood in line and grinned broadly while a girl with a tape measure took account of each grin in turn. The winner received as a prize a smirking little china pickaninny.

The refreshments were in keeping, for they made everybody smile. They consisted of pink lemonade and ginger cookies with faces marked on them in white icing. The most conspicuous feature was, of course, the grin.

The refreshments committee had bought or had had made many such cookies, and had met the previous evening and put on the sugary smiles.

NOTE: A list of appropriate recitations for the Smiles Social will be sent on receipt of a stamped self-addressed envelope. Address the Entertainment Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York City.

Make Your Home Say "Come Again!"

By Marion Brownfield

HOW does your home impress people who enter it for the first time? I don't mean, what do they think of our furnishings—but are they at ease, and do they want to come again?

You probably can think of houses that a child you either liked or disliked to visit. Children, while frequently unable to discriminate between cheap and expensive furnishings, are very sensitive to the "air" of a home. They immediately feel subdued and unwelcome in a dark old room furnished with slippery hair-loth chairs, although they cannot tell why.

Many of us grown-ups are so occupied with other affairs that we do not give our home atmosphere much consideration; but, even if we are not consciously affected by it, every stranger or friend who comes into our dwelling senses it at once.

I can think of one home that I always feel depressed after leaving, and it isn't because the home maker herself is discouraging. It is because the actual air, combination of gasoline fumes from the kitchen stove and strong tobacco smoke from her husband's pipe, pervades the whole house suffocatingly, and no amount of cheerfulness on the part of my hostess overcomes it.

I can think of another home, a small cottage of six rooms, that I always feel happy in, as soon as I enter. I believe the reason is this: Just beyond the hall, through a large open door, is a small porch passed in to make a "sun sitting-room," and this porch full of sunshine and with green growing plants along the window sills seems to light up the whole house and

welcome everyone coming in the front door.

Sometimes it is a contented cat purring upon the hearth, the way an easy chair is drawn up to a table and reading lamp, or a canary trilling in a bay window that makes us remember our friends' homes with pleasure.

Fortunately, in the majority of houses, a pleasant, cheery home atmosphere is not dependent upon money. Sometimes it is only a matter of keeping the rooms well aired and the shades high enough to let the sun in. There is nothing like sun to make a room homey as well as healthful. Sometimes just slight changes in the furnishings will make people want to come again.

Perhaps large, darkly framed pictures need to come down, or perhaps a new couch cover or table cover will brighten things. Again, there may be too much bric-à-brac about. Mantels, tables, and cabinets overspread with curios and knick-knacks give a room a cluttered look that is apt to make a guest feel crowded.

If you are going to buy anything new to cheer up the house let it be either some plants that will bloom in the window, or some soft, dainty curtains which can be laundered easily and which will let in plenty of light.

Many a mountain cabin, vacation lodge, and even a shack of the Western ranch has an optimistic home atmosphere just because it has light, sun, air, and simple but bright furnishings. With these things in mind, why not step outdoors and walk in again, pretending you are a total stranger? Perhaps just a slight change will make you and your friends happier.



Here's Your Sort of Summer Shoe

You'll see the banker, the merchant, the business man wearing Keds this summer.

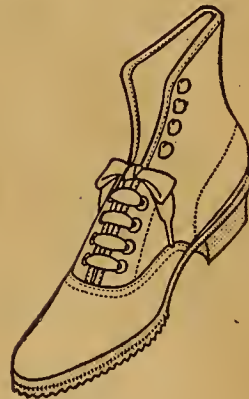
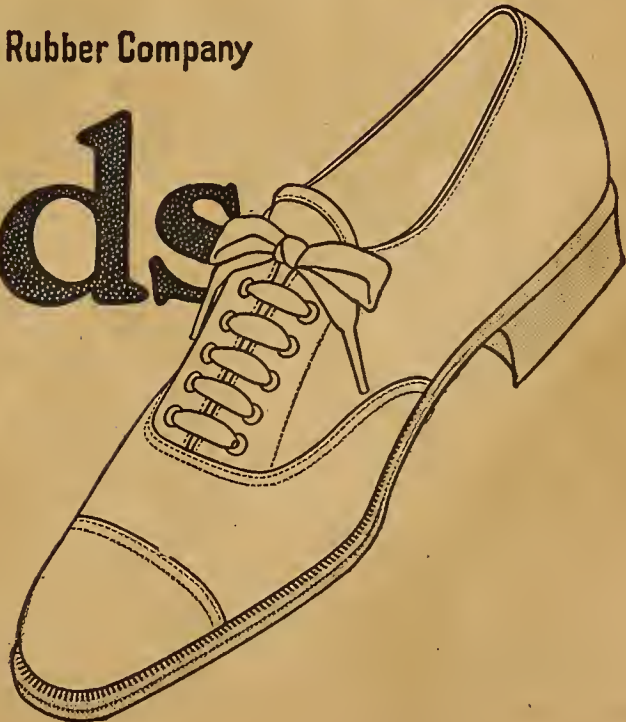
No need to ask why, for the first glance at Keds will tell. They're canvas rubber-soled shoes that are comfortable and correct for every occasion.

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United States Rubber Company

Keds



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FARM AND FIRESIDE

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How About Your House Dress?

By Margaret A. Bartlett

DARK dresses breed carelessness; light ones, carefulness. A dark cotton dress catches and retains as much dirt as a light one.

Don't use your dress as a towel. Have a towel always handy near the sink, and wash and wipe your hands frequently while about your housework or cooking. Dirty hands are a very frequent cause of dirty dresses.

If you have a loop on your dish towels, and pin one to your belt when cooking, it will always be handy when the oven door has to be opened or hot dishes handled. It is dangerous to use your skirt or apron, and results in unsightly smudges besides.

Train yourself to stand at least an inch away from sink or stove when washing dishes or cooking. Nothing so quickly soils the front of the dress as the habit of constant leaning while at work. If you are too tired to stand on two feet with your chest out, rest a few minutes before beginning the task.

Little aprons, with bibs attached, may be made either to tie around the waist or fasten by buttonholes to buttons correspondingly placed on the waistband of the house dress. They are simple to wash and iron, and since they may be made from the unworn parts of old sheets, house dresses, aprons, etc., a good supply should be always on hand, from dark ones to use doing dirty work, to white ones to slip on when cooking or when the door-bell rings.

For washing, an oilcloth or a rubber-lined apron, or one made from a cast-off raincoat, is indispensable. One cut like a grocer's apron, with a strap to go around the neck and laps to keep it in place over the hips, is best.

When scrubbing floors have a thick pad of old carpet to kneel on. It will save both knees and clothes.

Let the house dress be simply and becomingly cut, preferably in one piece. There should be no tight waistline to restrict the freedom of the arms; neither should

the dress hang wrapper-fashion from the shoulders. The elastic-belted style or the bungalow-apron type, with adjustable belt of same or contrasting material, is becoming, comfortable, and serviceable.

The skirt should be short, and only full enough to allow a full-length stride. Too narrow skirts many times are the cause of falls, inconvenience and embarrassment, while too wide ones are so much added weight and mere dust collectors. Let keeping your house dress clean mean as much to you as keeping your floor clean.

Of course, the described costume is not for barn or garden work. Don't use it for such. Don overalls.

ISN'T this a charming hat for summer? Directions for making it, and a large photograph, showing the pattern plainly, will be sent to you on receipt of four cents in stamps by the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio. Order No. FC-115.

How to Keep Your Silver Shiny

By Jane Macpherson

IT IS not such a difficult matter to keep silver from tarnishing if the causes are understood. Tarnish is the result of the combination of the silver with sulphur, but this occurs only in moist air. Tarnish will never appear on silverware that is kept where the air is perfectly dry.

Air contains hydrosulphuric acid, which comes from burning fuels, from cooking,

from lighting gases, and from decaying organic matter. For this reason, silverware should be kept out of the kitchen, as vegetables and meats in the process of cooking give off sulphur gases.

Jewelers often use a thin coating of shellac on their displays in order to keep the silver from contact with the air. Trays, candlesticks, cake and fruit stands, and other pieces not frequently used may be treated in this way, as the shellac does not easily chip off.

Wool should not be used for wrapping silver, as animal fiber contains a large amount of sulphur. White cloth is often bleached with sulphur, and will tarnish silver wrapped in it.

Soft, unbleached cotton cloth is best for wrapping silverware, which should then be kept in a dry place.

Springtime Dishes

DANDELIONS—Gather only young, freshly grown plants. Wash thoroughly, and boil until tender. Drain, chop finely, mix with the following sauce: One-fourth cup vinegar, one-fourth cup water, one tablespoon butter, one

tablespoon flour, one scant teaspoon salt, and a dash of pepper. Garnish with hard-boiled egg slices.

Hat in Picot Mesh



BAKED RHUBARB—Bake for plain baked rhubarb, adding two or three layers of raisins of some stoned dates. Raisins of dates must be washed and stoned, covered with boiling water, and simmered till the water almost absorbed before adding the uncooked rhubarb. On top sprinkle stale bread crumbs, chopped nuts and cracker crumbs. Candied orange or lemon peel or ginger may be used in place of the raisins or dates.

ASPARAGUS SOUP—Boil one quart asparagus cut in inch lengths, in one quart water until tender. Rub through a colander, and return to the water in which it was boiled. Heat one pint of milk, and thicken it with one tablespoon butter rubbed to a cream with one tablespoon flour. Season with salt and pepper, and pour into the asparagus. When boiling hot serve with toasted bread sticks.

SPRINGTIME CARROTS—Dice eight young carrots, cover over with boiling water, and cook slowly until tender. Drain, saving the water for the sauce. Mix together one tablespoon butter with two tablespoons flour, and add one cup meat stock. Season with pepper and salt, and add one cup of the water in which the carrots were boiled. Let it come to a boil, pour over the carrots, and serve hot.

EGGS IN SPINACH NEST—Boil six eggs hard the day before wanted for use. Drop them into the vinegar with beet pickles to color. Cook the spinach in the usual way, drain, season with salt, pepper, and lemon juice; place on a flat dish, and arrange the eggs on it.

RHUBARB CUSTARD PIE—Beat an egg with three-fourths cup sugar and one tablespoon flour. To this add one cup rhubarb, chopped or cut fine, and one-fourth cup water. Bake with one crust. When done, cover the pie with the beaten white of an egg, flavored to taste, and let it brown in the oven.

Do Your Wife and Baby Get a Square Deal, Mr. Farmer?

[CONTINUED FROM PAGE 28]

hour. Her physician names one fee for prenatal birth care. He tries to keep her in good condition during the entire nine months, because he knows this means an easier time for him as well as for her, when the baby arrives, and it insures him against the disgrace of losing a mother from any preventable cause. Yes, there among obstetricians it is considered a disgrace to lose a mother through neglect either before or during child birth.

Your city doctor directs your diet to keep the child normal in size and weight, and to protect you from indigestion, heartburn, constipation—all those small ailments that make life miserable. He is especially watchful of the kidneys, to make sure that no poison lurks in them to cause the toxic condition which leads to convulsions when the baby is born. And he arranges, if possible, for your care at a hospital, where all attendants, every utensil, cloth, bit of linen, even the walls of the room, are sterilized—an environment from which every germ is expelled for your safety.

Now, you country women can have the prenatal care if you will demand it of your

came an obsession with me to set the best table in our community, and when I recall how I fried doughnuts, baked fancy biscuits and breads, iced cakes and me- ringued pies, I wonder that my child was not taken from me as a judgment for my folly!

It may seem hard to dress the living children more simply, to set a simpler table for the men-folks; but if you believe firmly that your first duty is to conserve your strength and protect your unborn child, eventually every member of your family will come to share that belief, and to help you give yourself the care which your high mission as a prospective mother deserves.

Many women write me that their husbands consider all these ideas on pre-natal care as so much folderol. But just the minute a man reads intelligent, simple literature on the subject, or gets the true idea that preparation for motherhood will save big bills for care after the baby comes, he will give these advanced ideas his most respectful attention. Bearing children is a natural, physiological proceeding with many a normal woman. With or without care she may survive, but this does not

Deaths in the first year of life and for certain selected subdivisions of the first year. For cities in the Death Registration States* and the rural part of the same States. 1916 Mortality Statistics, Bureau of the Census.													
Area	Under 1 year	Under 1 day		Under 1 week		Under 1 month		3 to 5 months		6 to 8 months		9 to 11 months	
		Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent
Cities in Registra- tion States†	78,784	11,583	14.7	23,777	30.2	34,225	43.4	13,113	16.6	10,461	13.3	8,656	11.0
Rural part or Regis- tration States.....	73,551	12,812	17.4	25,197	34.3	36,182	49.2	11,201	15.2	7,878	10.7	6,621	9.0

*This included, in 1916, 26 States and the District of Columbia.
†Includes the District of Columbia and cities of 10,000 or more inhabitants, according to the census of 1910.

doctors. And you can have hospitals in your county seats if you will raise the funds for them as you raise funds for churches and libraries. You have shown what you can do in raising money during this war for overseas relief, for the American Red Cross, for the Y. M. C. A., for Liberty Loan drives—for any patriotic cause that roused you to action.

Well, the saving of your life as a mother, the saving of every baby born into your home, is patriotic service. Now, while the ability to organize and raise war funds is recognized by the entire communities, organize your hospital fund. It means better doctors, better nurses, stronger wives, and healthier babies.

This is not the country woman's job alone. It is also the farmer's job. It means more comfort, prosperity, and happiness in his home if he has a strong, smiling wife, who comes back from bearing a child at a properly conducted hospital, in fit condition to resume her home duties and to rear the child she has borne him. Funerals may be interesting and pathetic, but they do not stand for economy. It is efficiency, economy, conservation, all rolled into one, to maintain a good hospital in the center of a rural community.

Until hospitals are available the country mother must stand firm for the best medical and surgical care she can command in her home. First, she can and must make her family physician responsible for her health during the months of waiting and when her baby is born.

This takes time. The average busy mother on a farm thinks it is courageous and economical to stick to her duties when certain small symptoms prick at her over-worked body, as a guilty conscience pricks at your sleeping hours. Some of these duties she could remit for the sake of herself and her unborn child. A certain round of work which makes for family health and sanitation in her home must be done. But we can cut out some frills if we will. I recall very well that before my second child was born I sacrificed my health and comfort and the contentment of my family to personal pride. I was cooking for a hard-working husband and two hired men. Help was scarce in our section at the time, and I know I had often held hands for my husband by my good table. It be-

mean that she will return to her duties with health and nervous energy unimpaired. Good prenatal care is health insurance, and just as the head of the house insures his buildings and household effects against fire, so he can insure his home against the loss of the mother, by prenatal care, better obstetrics, better care after baby comes. And if he is a good business man—which most farmers are—he will make the investment, provided that it is properly presented to him.

And a good way to present it is to secure a complete set of bulletins on the subject. The average man will study a government bulletin carefully and intelligently.

So every prospective mother on a farm should send to the Children's Bureau, Department of Labor, Washington, D. C., for its free bulletin on "Prenatal Care," which has been prepared by one of the experts of the Bureau who has studied the problem in both cities and rural districts. The farmer's wife should also send to the State Board of Health for its bulletins or pamphlets on prenatal care, infant care and feeding. Many state universities and agricultural colleges, through their departments of domestic science, issue leaflets or bulletins on diet for expectant mothers, and the preparation of food especially suited to stomachs disturbed by ailments peculiar to that period.

If you are personally interested in these matters just now, if there's a baby at your home or coming, read the announcement elsewhere in this issue, entitled "Are You Worried About the Baby?" It has news for you. The men should read this too.

When the farmers of America have given to this problem of prenatal care in their own homes the same study and thought they give to problems of stock and crops, the infant mortality rate will be cut in two. For once men grasp its mighty possibilities they will demand it for their wives, and my correspondent will live to see the day of stronger mothers, healthier babies, and better doctors.

A future article will deal with problems of infant care and feeding, which follows naturally on the study of prenatal care. But prepare your mind for this article by sending for the federal and state bulletins on prenatal care, which means safety in bearing little children.

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"Soul Overtones" and Squash

By Wilbur Hall

"QUIT," I said disgustedly. "You're too pig-headed to argue socialism with. Come on around to the Radicals to-night and go against a real authority—unless you're afraid."

Seahury laughed. He is big and dark and handsome, and when he shows those white teeth in one of his wall-shaking laughs you forget that he is hide-bound and reactionary and obstinate, and you forgive him, in a way.

"I'm not afraid of your socialistic authorities—I'm afraid that while I'm there your cluh may be pinched!"

But he went. I was going to steer him into Giles or Pitner—some of those hed-rock fellows who can tell you offhand how many iron puddlers are scarred for life in every twenty-four hours in Pennsylvania alone, and what per cent of children raised in mill and sweat-shop districts go through the seventh grade. Those were the sort of facts George Seahury would listen to, and if you could give him facts he was easy to get along with. I saw myself sitting back watching and grinning while Carford Giles converted my reactionary friend.

But he stopped at the door of our little club house—stopped dead. I went back to him.

"Come on!" I said. "Nohody's going to hit you."

"One of them has already," George said in a solemn way, staring across the room.

There were quite a few there before us, scattered around the edges, talking and smoking. Probably twenty men and ten or twelve women. On the opposite side from the door there were three people—Messer, the psychology crack, and little Flora Kent, and—

"You mean the tall girl?" I inquired of George.

He gulped and nodded. But there was no need to ask.

Catherine Coster was the third in that group, and she was staring at us just as George was staring at her.

I jerked his coat sleeve.

"Don't be an ass!" I grumbled. "Come on and meet the Knights and a few of them, and then I'll tell you about that girl."

He allowed himself to be led on meekly, and I smiled to myself. Of all eligible women on earth Catherine Coster was the most ineligible and impossible and unthinkable for George Seahury. Radical? Catherine was so extreme that she made all our craziest fanatics seem like members of the National Republican Central Committee. To put it bluntly, she was a plain nut, and nothing could come up that was new that she didn't hurl herself into. She would drive a sober, hard-headed, God-fearing conservative like George to alcohol and alimony in six weeks!

Two or three minutes later I heard him ask Julia Knight about the tall girl.

"Which one?" Julia asked. "Oh, yes—with the bronze hair and that unmentionable smock? Catherine Coster."

"Is that—that what-do-you-call-it unmentionable?"

"At the very least."

"Oh," George said. "You know, it looks rather becoming."

"That's Catherine. She'd be a raving beauty in a Mother Hubbard and a skull cap. She's clever too, but she's an awful

nut. Man, she even takes Chinese herhs!"

"Does she really?" George asked politely. But I knew he wasn't listening. For the moment he wouldn't have listened if Julia had been telling him that the Coster girl poisoned people and sniffed cocaine.

social evenings, George," I said. "When will you be back in town?"

"Never!" he shouted, and hung up on me.

I met Catherine going out for lunch a day or two later, and I joined her. Even I can afford to take Catherine to lunch,

you ever heard of the great Seabury Squash?"

"The great—no. Is it geographical or astronomical?"

"It's a vegetable—a kind of edible pumpkin. You know—'When the frost's tooorri-oodle, and the rumpy's on the squash?' That Riley poem?"

"Squash, certainly. But what has that to do with Mr. Seahury?"

"Everything. He bred, developed, whatever it is, the famous Seabury squash! . . . Oh, on and laugh if you must, but it's the most wonderful squash known to seed trade, and it makes George about a hundred thousand a year."

"He's the squash king—or the king of the squashes! Is that it?"

"Squash is only one thing," I retorted with dignity. "It is his speciality, but he raises hundreds of other vegetables."

"And then what? Does he peddle?"

"Of course not! He's not a vegetable raiser, he's a vegetable seed raiser. Ships seeds all over the world. You've seen those boxes in the stores—'Do your spring planting now!'—with the picture of a pretty girl hounded by lettuce on the north, beets on the east, cantaloupes on the south, and—"

"Succotash on the west?" Catherine interrupted. "Oh, yes, I've seen them. I understand now. So he—go on and tell me about the squash."

I told her as much as I could remember. I knew it took George about ten years to bring that seed to perfection, and he sacrificed and slaved and studied, and lived on macaroni and cheap coffee all that time, until he had finished his experiments. I tried to tell it lightly, to suit Catherine's mood, as though I were amused too, and I ended with a feeble joke.

Catherine blazed out at me. "I think it's stupid of you to make fun of that sort of work!" she cried. "Stupid and brutal! And it scarcely becomes either you or me to poke fun at the earnest and sincere labors of a producer!"

She would scarcely speak to me from then on. But at the door she said suddenly: "Do you suppose I could get a hook at the library about seeds?"

"Sure," I said. "Plenty of them. But you'd find them mighty dull."

She stuck up her nose at me.

"Dull? I read your last novel!"

She turned up Market Street, toward the library. It began to strike me that Catherine Coster was a wonderful thing to look at, as George Seahury had said. It had always been a pleasure to have her around, and she seemed rather to decorate a room when she came into it; but I hadn't noticed her much. Now, with the illumination thrown on her by George Seahury's enthusiasm, I began to think something about her beauty myself.

Then George Seahury came back to the city.

"How's the squash and all the little squashes?" I asked him.

He smiled at me across my desk. I think I've said that George is big and dark and good-looking, and that his smile shows itself and him off to distinct advantage.

"It's sweet peas [CONTINUED ON PAGE 35]



For a few minutes they said nothing more. Then George leaned toward her, holding the table edges to help him control himself

He was completely out of his mind. Someone else finally introduced him to Catherine, and I never knew how they got along that night. But going home George said suddenly:

"It's too damned bad!"

"Sure," I agreed. "What is?"

"That apparently grown men like you and some of your gang there to-night should drag a lot of ignorant, susceptible girls into your idiotic cluh and make them think it smart to become blithering fools. Why don't you go off and have your lunatic notions in the mountains somewhere, where they can't do any harm? It's rotten, that's what it is!"

"You mean Catherine Coster, of course?"

"Well—yes."

I giggled.

"Catherine isn't ignorant; and she hasn't been dragged, because she isn't the kind that drags well; and if you think she's susceptible, you try it, that's all."

"She's the most wonderful thing I ever saw!" George Seahury exclaimed passionately, "and thanks to you addle-pated revolutionists there to-night she's the biggest fool!"

"Did she read you some of her poetry?" I asked guilefully.

"Do you think I'm one of your kind of hugs?" he snapped. "She did not! But she tried to tell me about it. 'Harmonics of the Soul' or something."

"'Soul Overtones.' Good stuff, too. She has a publisher for them, at any rate."

"What does that prove? You could write the ravings of John McCullough in blank verse and get a publisher for them nowadays! Poetry? Pusillanimous piffle!"

He was still muttering and using superlatives the next morning when he called me up to say good-by.

"I wanted you to go up to one of our

because she has money of her own—slathers! And she always insists on paying her own way.

"What was that—er—dress thing you wore at the club the other night?" I asked, after we had put the waitress to work.

"That smock?" Catherine answered. "Zuni! Pattern and color and weave and style. I designed it. The Zunis had more appreciation of the psychology of color than any people except the Egyptians." (I think she said Egyptians, but for all I know it may have been the Chaldeans or the Koreans.) "That shade of lavender is a defiant color. Freud has worked out a theory—"

"Oh, yes," I interrupted. "I'm familiar with that theory. When does 'Soul Overtones' appear?"

"About the twentieth. I've had corking letters from some of the pre-reviews, and an offer to write an introduction for the second edition from—well, I can't tell you, but he's one of the really great moderns."

"That's splendid!" I said. "Will it run into a second edition—so soon, I mean?"

Catherine shrugged.

"Quien sabe? But we're doing the binding in rather a new way—old rose Levantine with a limp suede interlining. I'd tell you about it if I thought you would understand. By the way, isn't that Mr. Seabury a friend of yours?"

"I brought him to the club the other night—yes."

"What does he do? He's an awful hear!"

"No, he isn't really. But he's conservative clear back as far as his collar bone. He doesn't approve of—er—us."

"He told me he didn't—first person singular. He talked like a business man, but he looks like an out-of-door fellow. I couldn't make him out."

"Probably not," I agreed. "But have

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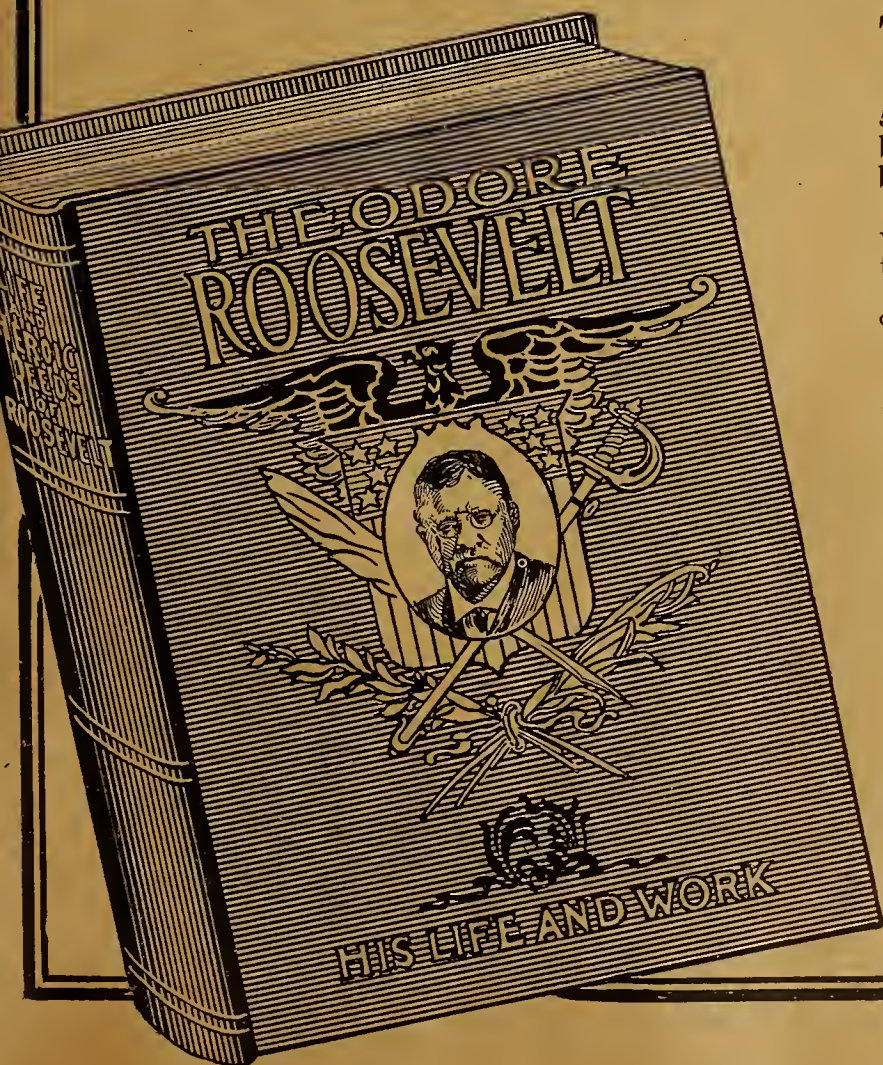
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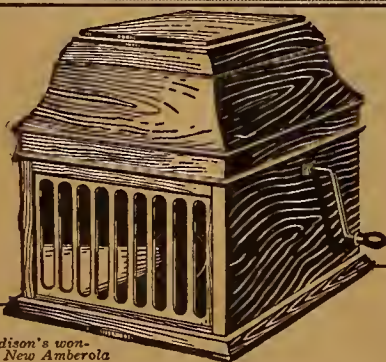


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Are You Worried About Your Baby?

By Helen L. Crawford

HAVE you a baby in your home, or do you expect one soon? If so, you want to know just what to do to make him well and strong and bright and happy, and keep him that way, don't you? In fact, you want him to be a "better baby."

You fathers and mothers want rollicking, robust youngsters, of course, and it's quite logical that the better start you give them the stronger men and women they are going to be. The better care the expectant mother takes of herself the sooner will she feel well enough to be up and about, the quicker will she regain her strength after baby's arrival. So it's to the advantage of the whole family that you know what is best for you, isn't it?

I wonder—have you ever heard of the Better Babies Bureau which is conducted by the "Woman's Home Companion"? It helps thousands of mothers-to-be each year, through practical advice and helpful suggestions, to keep well and happy before Baby comes, and, after the little mite puts in an appearance, to keep herself and him in the best of health.

I was talking to Mrs. Benton, who has charge of the Bureau, just the other day, and as she spoke of her work it gradually began to dawn on me what a really great thing this Bureau is. And when I learned how many thousands of women were helped by her letters, and when I read some of these letters and saw how truly wonderful they are, I decided at once that it was our duty to put this Bureau at the service of FARM AND FIRESIDE readers if such a thing were at all possible.

I broached the subject, and Mrs. Benton kindly consented, since we are a member of the Crowell family, to help you in the same way that she helps the readers and friends of the "Companion"—to send you her letters.

Let me tell you a little about this Better Babies Bureau. There are two departments—the Expectant Mothers' Circle and the Mothers' Club. When you join the Expectant Mothers' Circle a letter is sent to you each month of the period of waiting telling you what to do to keep yourself in the pink of condition and to assure you a healthy baby. Then, too, you receive messages containing suggestions of helpful books to read and of lovely things to make. They tell you how to make the period of waiting one of happy expectancy.

The Mothers' Club is also a department of personal correspondence—this time between the Better Babies Bureau and the mothers-elect. The Mothers' Club sends each mother who enrolls a letter each month for a year, following the development of her baby along, and telling her what to do for him when all does not go well. There are also leaflets containing suggestions for the first short clothes for Baby, for books to read that will aid in training him, suggestions on how to pass the weaning and teething times comfortably, and how to keep Baby clean and happy.

To show just what the "Companion" parents think of Mrs. Benton's work I am going to let you read a very few of the inspiring letters she has received from them—and she receives hundreds each month. Here they are:

"The last of your letters came, and I

am indeed very sorry to learn that they are ended.

"I have followed, as closely as possible, all your suggestions, and have not words enough to thank you. My baby has never been sick a day since her birth. Her little body, as well as her disposition, is perfect. We are most appreciative and deeply grateful for the valuable help given us by the Better Babies Bureau." Mrs. J. M. H., New York.

"I wish I were able to tell you how much pleasure, as well as profit, I have derived from your letters of the past year. I am sure no girl ever felt more keenly the need of some practical help and suggestions than I, and as my mother is too far away for me to depend on her for advice, your letters were my greatest assistance. Please accept my deepest thanks for the aid you gave me in bringing into the world the



The bath-tub smile

dearest little better baby that ever lived. She is now more than two weeks old and doing beautifully. Enclosed you will find stamps to cover postage for the next letters. It seems such a small amount for such great returns.

"I scarcely can wait for the next letter." Mrs. H. B. E., Oklahoma.

"I really cannot say how glad I am that I wrote you, or express my thanks sufficiently for your cheering letter, the 'Little Helps,' and other circulars. I have no parents, and my husband's people do not live here, so that I have no one to whom to turn.

"I used to wonder how in the world I was ever going to find out all that I wanted to know, about what I should do, when, and how, and what to expect, also how to help myself to keep healthy, and all the myriad questions that come into one's mind at a time like this. Now, I feel as if I had had a new education, and I guess I read your letters over six or eight times a day. I surely will think of the Circle as a help-one-another club, and will be only too glad to pass along any little thing that has helped or cheered me." K. O., Michigan.

What the Fathers Think About It

"As a physician especially interested in diseases of children and in child welfare, I have felt a keen interest in the work of your Bureau. There is a great need for educational work of this kind among the mothers and prospective mothers of our

land. Too often do we see the harmful effect of ignorance, and how many little lives might be saved had the mother been properly trained in the care of the baby. It gives me great pleasure to commend your service to prospective mothers who take care of details that the average physician has neither the knowledge nor the patience to cope with. It always a great help to the physician if he can enroll these patients with you.

"My wife is an enthusiast over the Better Babies Bureau and has been helped very materially in the care of our boy. Even though his father is a physician, he does not have to rely on him entirely for advice on the little things that, after all, are so important for the baby's comfort and welfare." L. D. W., Ohio.

"I envy you your work of relieving expectant motherhood of its blind dread. My wife did not suffer from the periods of despondency I have often noticed in expectant mothers. She was in the best of health from start to finish, and we attribute much of the credit to the healthful, wholesome point of view which your letters had to." D. G. K., North Carolina.

"Son arrived the eighth of this month, weighed ten pounds, and is as fine a specimen of American babyhood as you ever saw—sound as a dollar.

"I want to express to you the appreciation of my wife and myself for the service your department has rendered us. The work you are doing is an excellent one, and if you could see the pleasure and benefit it is giving your correspondents, judging other cases by our own experience, it would make your heart warm still more to your work and make your daily routine a source of great comfort and pleasure to you.

"Your articles and pamphlets helped chase away all my wife's 'blue days,' taught her short cuts in preparation for the baby, and kept her cheered and interested." C. H. M., Louisiana.

And here is the way the plan works out: **EXPECTANT MOTHERS' CIRCLE**—Any woman eligible may become a member, receiving each month a letter of advice on the care of herself and the preparation for her baby. No matter at what period you enter, everything from the first month will be sent. No mention of the Better Babies Bureau is made on the envelopes in which the material is mailed. Enclose a self-addressed envelope with fifty cents in stamps—which scarcely covers the cost of postage and printing—and state what month you expect your baby. Address Better Babies Bureau, FARM AND FIRESIDE, 381 Fourth Avenue, New York City.

MOTHERS' CLUB—Every mother of young children is eligible for membership in the Mothers' Club. Pamphlets, together with monthly letters of instruction on the care and feeding of babies under one year of age (covering such subjects as colic, constipation, weaning, teething, etc.)

will be sent to a mother who sends fifty cents in stamp and states the age of her baby. There are also leaflets giving diet lists, and other helps for babies from one year of age to three years. This literature is all included in the Mothers' Club's monthly service, but if the letter are not desired the additional literature will be sent for ten cents. A stamped self-addressed envelope from any member of the club will bring a prompt reply to every inquiry. Address all inquiries to Better Babies Bureau, FARM AND FIRESIDE, 381 Fourth Avenue, New York



First aid to walkers



On this page are some of Mrs. Benton's "Better Babies." She loves each and every one of the youngsters she has helped along. And most of them are just as fat and jolly-looking as these. But nearly all of her babies are city-born, and now she wants some from the country. We are betting that yours will be even huskier than these

“Soul Overtones” and Squash

[CONTINUED FROM PAGE 32]

this fall,” he answered carelessly. But I knew the carelessness was a pose, because never man took his work more seriously than did George.

“Sweet peas? What’s the big idea?”

“Why, I don’t know that I mind telling you. I’ve been thinking a lot lately about hospitals and convalescent stations. All over the world! Ever stop to consider the number of men who are lying in hospital beds now, and will for some time to come? Hundreds of thousands. And anyone can raise sweet peas, in almost any climate and in any soil. Do you see?”

I thought a minute, and it made me chokey to think. If you knew George Seabury—conservative, matter-of-fact, prosaic—you’d understand why I choked up when I contemplated the idea of his thinking of the need of flowers to brighten sick-rooms and to bring beauty and light and color and freshness into lives bruised by horror and torn by suffering.

“That’s fine, George,” I said. And then, because I really thought it was, I tried to disguise my feelings, as most men do when they are afraid they are a little soft, and I turned flippant. “There ought to be money in it too.”

“There might be,” he said, abstractedly, “only, I’ve offered the Government to grow and donate a hundred tons of the seeds, and more if they are needed.”

That staggered me. I tried to frame some adequate expression of my admiration for this big, splendid thought of his.

“You’re proposing to do something,” I said, “that will be remembered long after some of the battles have been forgotten. You will make me feel like a nobody and a—”

But George was miles away, staring at my wall. Presently he turned half around. “Do you suppose she would mind?” he asked.

I threw down my pen.

“George,” I said, solemnly, “you’re getting feeble-minded! You ought to go to a specialist—”

“Oh, don’t talk like a chucklehead!” he exclaimed. “I asked if you thought there would be any objection to my calling my new, white-hearted, long-stemmed lavender sweet pea the Catherine Coster?”

“I misunderstood you,” I said meekly. What was the use in telling the poor simpleton that he hadn’t even broached the subject, let alone asking me anything about it?

“No, I don’t think there would be, but I speak without authority. Why don’t you go to headquarters?”

“You mean Miss Coster?”

“Probably.”

“I believe I will,” he said, as though it was the first time he had thought of that. “And you’ll wait here to go to supper with me at seven?”

I WAITED for him until half-past eight, and then went out and bolted a cold “snack,” which immediately started my indigestion, as it always does. At ten, when he telephoned in, I was not amiable.

“I’m sorry, Pinney,” he said perfunctorily. “But I forgot all about you.”

“Of course,” I said. “Anything else?”

“How do you mean? . . . Now, don’t be a grouch! I’ll come up to-morrow morning.”

“If you don’t forget,” I snapped, “running after Catherine Coster.”

“I shan’t run very far after her,” he said, gruffly. “I can’t be bothered.”

“What’s wrong? Did she read ‘Soul Overtones’ to you finally?”

“‘Soul Overtones’! Say, haven’t you seen her in the last two or three days?”

“No.”

“She’s joined the faculty of a metaphysical college at a place called the Key of Life Mountain. She’s taking advanced Astral Research!”

“She—is?”

“She—is. The woman is a gift of God to men, and her brain is as added as an egg! It comes of your damned socialistic soirées and too little exercise. I’m never going to see her again.”

“Is that so? How self-sacrificing of you! And by the way!” It had just flashed into my mind.

“Well?”

“Did she—Miss Coster—happen to say anything to you about—er—vegetables, particularly—er—squash?”

George Seabury’s voice changed.

“How did you guess?” he asked eagerly.

“Yes, she did. The woman is a witch! She’s better informed about selective standardization and roguing for type than

anyone else in California except three or four experts. She wouldn’t tell me how she came to know, but she *knows*!

“Oh, yes,” I said viciously, prompted by a twinge under my heart. “Yes, George, Miss Coster keeps up with all the modern scientific processes, like seed selection and socialism. I suppose that’s what addles her brain!”

“Oh, go to the dev—”

But I had hung up.

An editor, suddenly confronted with the idea that his readers must know all about the post-war merchant marine building on the Pacific Coast, wired me about then to gird my loins and get me forth to the end that their thirst might be quenched. Knowing nothing about ships and shipping except that the former operate on the water and the latter smells unaccountably always of tar, I set out on this inquisition for him, and, at the cost of some traveling and many questions, compiled sufficient information to meet the need. It was six weeks, therefore, before I returned again to my desk. On it was a note from George Seabury:

F. P.—Stopped en route, found you away, borrowed all the stamps I could find, and took your second-best suit case. Where have you been with the good one?

Am on my way to Washington, by request, and will tell you about it when I return. It’s sweet peas, I may add. G. S.

By the way, I find this time that C. C. has taken up with the I. W. W., and is going to tour the State in some impossible campaign for funds or a pardon for some of its murdered, or something impossible. If the woman had a brain that functioned even subnormally, or if she could find some useful thing to do, I’d marry her and save her from herself. But, before Heaven, I can’t forgive calculated insanity!

I read that, chuckling, threw a pile of bills into the waste-paper basket, and came on a card from Julia Knight:

Drop in to tiffin Thursday evening. Catherine Coster has amazed us all by turning sane at last, and is going away on some reconstruction work in France. Come and give her your blessing and we’ll unite in singing a Te Deum, or whatever seems most appropriate. Hastily, JULIA.

THE day being Thursday, the hour being four, my clothes being eight miles away, and my curiosity being aroused, I went to the Knights “as is,” and, as soon as I decently could, led Catherine Coster into a dark back alley of a hall.

“Now, Catherine,” I said, “tell me about this.”

“Can’t.”

“Can’t? Nonsense! What’s the use of trying to envelop yourself in an air of impenetrable mystery with me?”

“Can’t—that’s all. I’d tell you if I could, old Festus. You’re as tanned as a motion-picture sea captain. Did you have a lovely time in Seattle?”

“Well, if you can’t tell me about this French mission—I sniffed a little—“you can tell me about something else. What on earth have you been doing to George Seabury?”

She flushed instantly—even the dim light revealed that much. But, womanlike, or at least Catherine-like, she temporized.

“Seabury? You mean—”

“You know perfectly well, Catherine. I mean George Seabury. He’s head over heels in love with you.”

She gave me the most innocent and guileless stare.

“Oh, is he?” she inquired, a shade too lightly. “Has he been making you his father confessor, or is this a John Alden?”

“Don’t be silly, my dear! George Seabury is quite capable of doing his own love-making, and, anyway, I’m too old by far. As for his telling me anything, George isn’t built that way. Just for example, he almost didn’t tell me why he’s raising sweet peas this year, instead of vegetable seeds. Would you believe it—”

“He told me,” she said simply. “It is splendid, isn’t it? But the trouble with Mr. Seabury is that he wants to direct, operate, and control the lives of other people to an extent that is—that is simply infuriating. He tried to tell me—me—what I ought to be doing with myself!”

“But wasn’t he right? That is—don’t be cross with me, Catherine!—don’t you think that you *might* be—”

“Yes,” Catherine interrupted soberly, “he was right. That’s what makes me so angry with him, I suppose. At any rate, I’m going to do it.”

“Do what?”

“What he suggested—ordered, I should

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say. But as for his being in love with me, much good it will do him. Am I the sort of woman to be—bossed?"

"No," I said, "you are distinctly not. Not bossed. But don't you think, Catherine, that a little—er—moral suasion—"

"Oh, mind your business!" Catherine flared, reddening again. "Come on and have some tea—you're wandering in your mind!"

All this occurred two months ago. This afternoon George Seabury came in, looking bigger and finer and handsomer and more efficient and more hard-headed than I have ever seen him look, and told me something. And here is what he *did not* tell me:

HE HAD been in Washington for a week or so, when hurrying from the Department of Agriculture to the State Department he saw swinging toward him on the crowded sidewalk a bronze-haired young woman whom he stopped with (almost) a shout.

"Miss Coster!" he cried. "I didn't suppose that anyone on earth was as lucky as this! Will you have dinner with me to-night, anywhere you say? Because even a Californian doesn't want to keep the State Department waiting."

Catherine laughed, shaking hands with the fine, cool, firm grip she has, and standing toe to toe with him.

"Never look gift luck in the mouth!" she said. "I'll be glad to dine with you to-night. I'll be at the New Willard at eight. No one keeps the State Department waiting, especially a Californian! Adios!"

That was all for then. At eight-fifteen, however, they were exclaiming in one breath over the size and flavor of Atlantic seaboard oysters, and at nine they were leaning their elbows on the table—despite what Catherine had learned at a finishing school and what George had learned from an old-maid aunt—and they were deep in intimate, personable, companionable conversation that excluded everyone on earth but their two selves.

"So I came on," George concluded, "and now they want me to go to England and France with the notion, and co-operate with certain officials there who are concerned with garden reclamation. That's all. And, now, you promised to tell if I would."

"But you haven't told me anything! What is your notion? Where are you going? I thought it was sweet peas?"

"It was. It still is, but it's bigger now. Sweet peas and corn and potatoes and—squash."

They both laughed. "Gardening for devastated areas, then?" Catherine summarized.

"Yes. On a tremendous scale. It makes me dizzy to think of it!"

"I can't imagine you with vertigo!"

"I control the symptoms and conceal the effects. Your turn now."

Catherine Coster colored and marked lines on the cloth with her coffee spoon.

"It's all your doing," she began lamely.

"Mine?"

"Yours. You made me so—so mad."

"My dear girl! How?"

"Saying that I was a fool and a faddist and a slacker!"

"Oh, I didn't say that!"

"Not to me. But even if you hadn't said it to others I would have known what you thought, because you looked it so thoroughly!"

"Well," he said slowly, and a good deal embarrassed, "you see, I couldn't understand free verse and collecting pipes and wearing sandals and fasting and theosophy and—and—all those things—"

"And the Key of Life School and I. W. W. and lavender smocks and smoking cigarettes and experimenting with opium to see just what De Quincy really meant—"

"You didn't?"

"I did. And a lot of other things. You couldn't understand those—indiscretions, you were saying?"

"I could understand them for cranks and silly girls, and poets who can't rhyme, and painters who can't draw, and musicians who can't play a scale, but I couldn't understand them for you."

Catherine nodded, her eyes down again.

"I know you couldn't. Lately I can't either. But it was just misdirection and misapplication. Are those good words? But you see what I mean?"

"I'm glad," George Seabury said. "I'm glad you feel this way. Go on and tell."

"Well, perhaps the latest notion will seem equally—feeble to you. But after you threw me into the dust and trampled on me and—"

"My—Miss Catherine Coster!"

"Figuratively." She gave him a dazzling smile. "After that I went back to the Red

Cross and asked them for a job. They gave me bandages to wind. That hurt my fingers and my pride. I saw that anyone could wind bandages. So I applied at the Red Cross Shop."

"What's that?"

"Sort of glorified second-hand store. They collect used clothing and pictures and books and toys and varnish them up—"

"The clothing and books?"

"Don't be clever! They furbish them up and sell them at bargain prices. Their children's department stock was low, so I designed and made some dresses and smocks for them. I didn't believe in myself one little bit up to that moment—the moment when I stood there and watched my things fairly *snatched*, and price no object!"

"But I don't see—"

"You ought to. It wasn't the fact that there was a demand for the things I created and built; it was the fact that I *could* make them, and that they were useful. It was the greatest minute in my life! The rest followed naturally."

"What rest?"

"The thing that brought me here. Did you ever happen to notice pictures of the dresses that the mites in France and Belgium are wearing now? Hideous enough to make them remember the war all their little shattered lives, instead of beautiful. Monstrous, awful, criminal nightgowns! For children whose souls have been almost crushed out of them and who are simply starved for real children's things!"

"I think I've seen the kind of—frocks you mean."

"Well, it seemed to me that children could be kept as warm in pretty, simple little clothes as in flour sacks. So I designed three dresses that could be made for just the price of calico *delirium tremens* we have been shipping before now. We made a hundred and sent them on. They asked us for a thousand, and as many more as we could make. Eventually Washington sent for me—and here I am."

George Seabury sat back in his chair. I suppose he felt about it something as I felt when he told me of his idea for raising sweet peas for the sick and wounded and beauty-hungry of a war-sick world, longing to forget. And Catherine had made him sense the sweet and sympathetic significance of her new ambition.

"If anything I said made you think of a thing as beautiful as that," he began slowly, "I'm prouder than I would be of a cross of gold!"

Catherine, too, sat back. For a few minutes they said nothing more. Then George leaned toward her, holding the table edges to help control himself.

"Catherine," he said, "when I first saw you, back there on the coast in that mad-house of fanatics, I loved you. I wanted to tell you so. But I *couldn't* love your—fads. It broke my heart."

She smiled with tears blurring her vision. She tried to answer him lightly.

"I hope that it is mended now—the poor heart!"

"It is," he said. "Because your latest fad I love almost as much as I love you. Almost! Do you mind my telling you?"

"No," she said unsteadily, "I don't—really mind. I think I—rather like it."

He touched her hand, then drew back hastily, his fingers trembling. Quite abruptly, waving an arm, he cried:

"I don't understand why the deuce hotel people need to light their dining-rooms like the front of a movie house! But I know a parlor up-stairs"—he lowered his voice—"where almost nobody ever goes."

"Do you?" Catherine inquired, gathering up her gloves. "What floor?"

THAT is what George did *not* tell me—all that. But he did tell me one thing: "We're to be married next week, just before we leave for England. Will you come and handle the ring for me, and prompt me, and all those things?"

"Delighted!" I replied, grinning. "But I'd like to ask you a question."

"Fire when ready."

"Is Catherine writing any free verse now—'Soul Overtones', or anything like that?"

He glared at me.

"Don't make fun of 'Soul Overtones!' he cried. "There are some beautiful things in that little collection, and it's selling amazingly. But no, Catherine is too busy for poetry just now." And he colored.

"How do you mean," I demanded. "Go on!"

"She's translating at present—a booklet I wrote on vegetable-seed selection. They want it in French. One chapter is on Squash!"

Here's What You Would Do if You Were a Chinese Farmer

[CONTINUED FROM PAGE 6]

around from 7 to 40 cents a day, and his clothes cost him about \$4 a year. His home is a little dried mud hut thatched with grass. Generally speaking, the farmhouses are located in villages and the men go out each morning to the fields. About ten families constitute a village, and each family farms in the neighborhood of 10 acres.

A young man starting out in life to follow the work and wiles of agriculture receives \$12 a year, together with his lodging, his straw shoes, and free shaving. The latter, free shaving, is quite an inducement, for the Chinese barbers remove the wax from their victims ears, scrape their eyelids, and, if so desired, shave off their eyebrows. As the young man becomes more proficient in his work he is gradually advanced to \$15 or \$20 a year, and there he stays, living in luxury the rest of his life. The yearly wages in the various parts of China are about as follows: Manchuria, \$15 to \$20; Chihli and Shantung, \$10 to \$20; Kansuh, \$19 to \$25; Chekiang, \$40.

The Chinese farmer's wife is not a person any of us would envy. She gets up at dawn with her husband, and sometimes helps him in the fields, and makes his clothes, even his shoes and hats. His clothes are made from homespun, and his shoes and hats are woven of straw. In the winter months, when he goes to the city in search of work, for most of the poorer farmers in China farm in the summer and work in the cities in the winter, his wife trudges along beside him and helps him with his carrying pole or carries a huge bundle of their worldly possessions herself. She has few clothes, and what she does have serves as working garments in the daytime and bed clothes at night, and are rarely removed from week end to week end.

Another of her duties is to prepare the firewood. There is very little available timber in China and the common fuel of the farmers is grass. She cuts the grass, and twists it into sticks about a foot long. These sticks are called stove vegetables. In front of each well-to-do farmhouse is a haystack, and the animals feed off one side while the farmer's wife works the hay into sticks on the other. She makes the sticks by means of a bow with a handle on one end and a hook on the other. Usually she has one of the oldest of her little girls turn the bow while she fixes the grass on the hook and feeds in the wisps. She twists the grass first into a single long rope six feet in length, and then this is doubled and redoubled until the result is a hard-

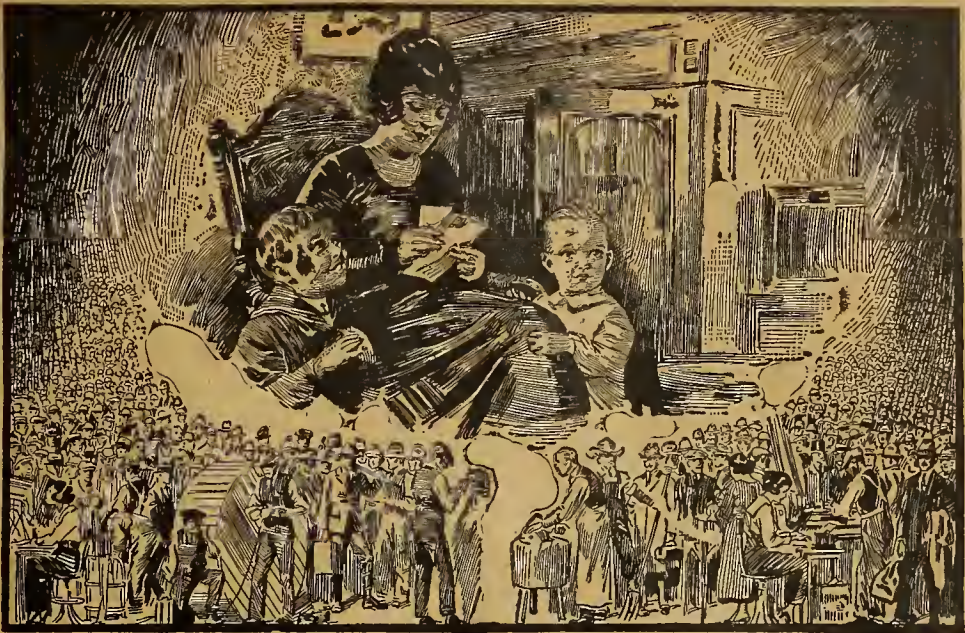
wound bundle like a twisted newspaper.

Her household duties are few. Much of her cooking is done in little baskets set over a pot of steaming water, piled one on top of the other to conserve fuel. She hardly ever uses lard or butter, using instead peanut oil or bean oil, which are much cheaper. Her life is a hard life of privation and work, like that of her husband, and if you go to China you will notice the sad, tired expression on her face.

In comparing the Chinese farmer with the American farmer, we have to take into consideration the fact that in China there is one farmer for every two acres. The American farmer uses larger scale production methods than the Chinese farmer, who is really not a farmer at all, but a market gardener. In this light we can appreciate his efficiency, when we find by comparing statistics that by his methods, if they were practicable on a large scale, which they are not, he could go a long way toward feeding every man, woman, and child in the whole United States on the arable farm lands of the State of New York alone.

His success in being able to make a living off so little land lies in the fact that he looks after the small ends, eliminates waste, and gets his results by hard, back-breaking toil. We would naturally expect him to produce more per unit of labor than the American farmer, but I doubt that he does, for the American farmer, with the aid of his modern machinery and scientific knowledge, gets much better results for the amount of energy expended. Yet, on the other hand, the Chinese farmer will derive a profit from lands which the American farmer would not consider at all—such as swamps and lands covered by water. This is perhaps due to the fact that he is willing to work day in and day out in the mud and slush, plowing, planting and gathering crops, under conditions which none but an Oriental could stand.

In conclusion we may say in general this: that the American farmer views his farm more as a whole, a unit, while the Chinese farmer raises his crops by individual rows and individual plants. He can gain much from our use of modern machinery and scientific methods, and we, in turn, can learn a great deal from a study of his elimination of small wastes. We have been farming for scarcely two hundred and fifty years, while he has been at the game for forty centuries. He farms with a short perspective, and in his way he is efficient.



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By L. E. Armour


HERE is a case of two farmers who have been under my observation for a few years. Their experiences prove that a farmer's success or failure depends about as much on his management as upon the crops he produces. Both came from the same distant State about six years ago, and bought land near us.

The one bought an improved farm of 60 acres for \$800, paying two-thirds cash and agreeing to pay the balance in two annual payments. He brought improved implements with him, and was able to cultivate more acres than a poorly equipped farmer. He planted largely of feed crops, corn, peas, peanuts, and potatoes, and produced much more than he could gather or house properly. Other farmers produced the same crops, so only a dull market existed for them, and no profitable shipping facilities were convenient. Besides his two horses he kept no live stock, not even a pig, and the money which he spent for milk and butter would have paid for a cow. He made no improvements, not even the planting of a fruit tree; spent the winters in idleness, and got deeply in debt. He sold his farm after four years, and of course blamed the soil for his failure. He has gone to find a better place. He has a small family, and with a sufficient number of pigs or calves to consume even the waste he could have lived independent of the credit merchant. Whatever place he may select as his home he will be a failure without a change of management.

The other had only \$150 in cash after paying his and his family's transportation. He invested this as one-half payment on a 40-acre farm with a two-room dwelling, a pretense of a barn, and a weak rail fence as its store of improvements. He brought his meat and lard for the first year. With these exceptions he had everything to buy on credit, even a horse. He soon saw the need of a cow, so bought one on the installment plan. When he had paid all but \$5 the cow died. He sold the calf to complete the payment, and bought another cow on the same plan as the first one.

He has sold butter enough to go a long way toward buying needed supplies and cattle to the amount of \$80. Three years ago he borrowed money and bought a pair of pure-bred hogs. Besides producing his own meat and lard he has sold some hogs at fancy prices for breeders. His first horse, a plug, died just when he was needed the most, but he bought a good mare on credit to replace him. He has built up-to-date fences, a poultry house, and barns, and added another room to his dwelling. He has a family of small children, has had much sickness and one death, all causing him heavy expense. He has planted fruit trees every year excepting one, and has already begun to realize a profit from his orchard. He has paid for his farm, owes no man anything, and does not believe a better place exists for a poor man. He plans ahead and always has a desired end in view.

Which of the two men makes the better citizen?



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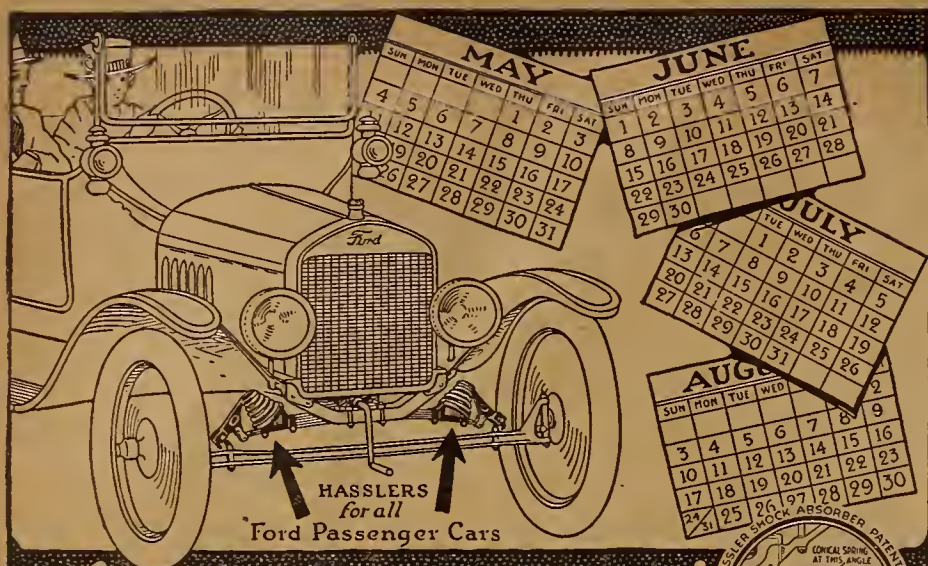
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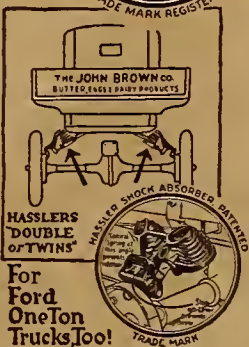
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IN YOUR own home town, where you know everyone, and everyone knows you, there is small chance of anyone's stealing your car. But if you are like other folks, you like to get away once in a while, and your trip usually takes you to some large town or city, and here your machine is not so safe. The auto thief is no respecter of persons or cars. It is a case of your wits against his, and I assure you his are quite sharp.

Thief-proofing the car can be done in a variety of ways, according to a writer in the New York "Evening Post." He says the ideal way to protect your car is to lock it, and in addition make use of one of the following hints:

If, when you leave the car, you can do some simple thing to it to render its operation difficult or impossible, the chance of a thief's taking the trouble, assuming that he has the ability, to make away with the car is about as small as if it were securely locked.

Whatever is done to put the car out of commission temporarily should be some thing hard for the thief to discover but easy for the owner to do.

Many of the devices employed affect the ignition, and one of the cleverest of these consists of the use of a two-candle-power electric bulb set in a lamp socket in the instrument board and connected to the primary ignition circuit in such a way that when the bulb is removed the current is shut off. When the owner leaves the car he drops the bulb into his pocket,

of locks which it seems right to include here. If the crank handle is carried locked in the tool box, then a fairly safe method of protecting the car is to padlock the starter pedal so that it cannot be depressed. The thief is thus without the ordinary means for starting the car, and cannot crank it unless it is on a hill or unless he can tow it away.

A padlocked damper on the intake or exhaust pipe can be used effectively. The best place for it is on the intake pipe, but a more unexpected place is on the exhaust pipe. The disadvantage with the use of such a damper is that if the device is home-made the hood must be raised.

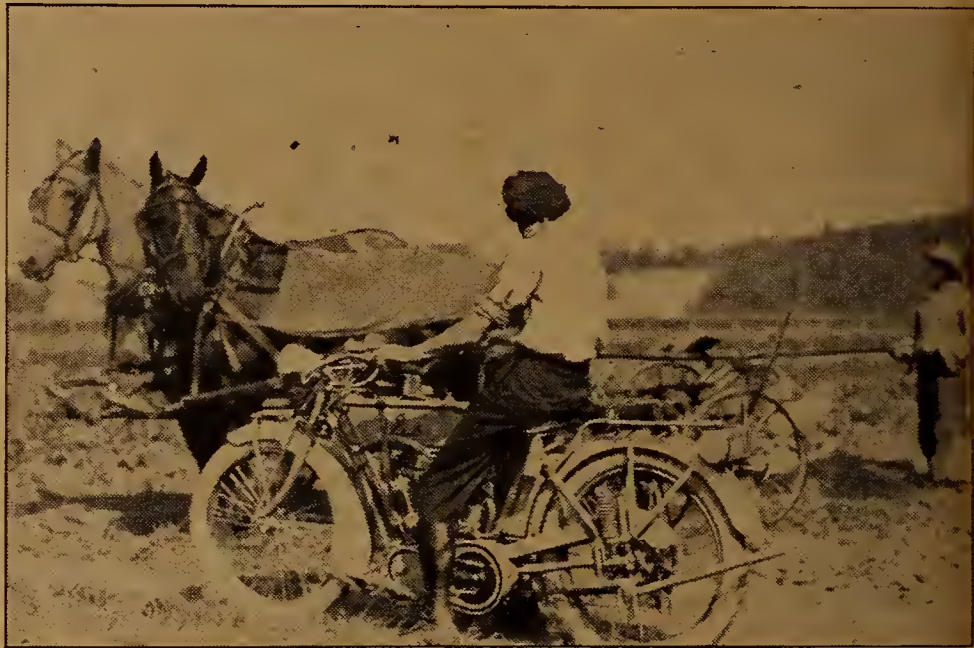
After you have provided your car with one or more safety devices, don't forget to use them. Every person's intentions are good, but many losses are the result of forgetfulness, and could be avoided.

Save Your Waste Oil

By H. H. Haynes

LIKE all good motorists, you probably drain your crank case occasionally, and then wonder what you can do with all that dirty oil. Your conscience rebels at what seems to you to be a waste. And it is a waste, for the greater part of that oil can be saved and used again, perhaps not in the motor, but for other lubricating purposes about the farm.

To utilize this oil it must be strained or



The motorcycle gives rapid transportation at low cost, and saves the horses long trips on the road

secure in the feeling that no thief will ever solve the secret.

This idea has a variety of modifications. A fuse might be used instead of a lamp bulb, or a hidden switch may be employed. The latter may be located under the front seat cushion, under the cowl, or on the back of the instrument board.

As the ignition current is usually shut off by grounding the primary circuit, an effective method is to ground the primary wire at some unexpected point, easy to reach but hard to see.

Removing some vital part of the ignition apparatus is excellent, but it involves the trouble of raising the hood. On all battery ignition systems and some magnetos the distributor brush may be lifted out without the slightest difficulty, and in about as short a time as it would take to lock the car. Short-circuiting the safety-spark gap is very effective, provided the gap is not in plain sight. A small ball of fine wire or tinfoil can be used to good advantage between the points of the gap.

Cables of the same length leading to the spark plugs can be exchanged on each pair of the plugs so that no spark occurs at the right time.

If the carburetor has a spring-controlled air valve it is possible to drill a tiny hole through the valve guide and the valve stem, so that when an inconspicuous pin is placed through it the valve is held open or closed, as desired, so that the engine does not receive a proper mixture.

A three-way valve in the gasoline line, operated preferably by an inconspicuous rod which extends out to the side of the car, will fool most thieves. With it the gasoline line can be shut off and the carburetor drained in one operation.

There are two or three interesting uses

filtered, to remove the dirt and sediment. This dirt, which may be particles of carbon, burnt oil, and perhaps powdered bits of steel, is all that makes it unfit for use. Remove it and you have practically what you started with, only a smaller amount, with perhaps a little of its "life" taken out.

Most manufacturers are inclined to advise one not to use this oil in the cylinders again, and to be on the safe side it is well to follow their judgment. However, there is no harm in mixing it with a very heavy oil or a light grease, and using it as a transmission or rear axle oil.

If you don't care to use it in your car, it makes excellent machine oil. The strained and filtered oil from two cars has furnished all the machine oil we needed the year round.

There is nothing you can do with the old, thick grease removed from the transmission. It is too heavy and thick to filter, and its life is usually gone. The best place to put it is in the furnace. It will at least make good fuel.

Safety First

AHANDY method of disposal for the gasoline tank on the farm is to place the tank under proper shelter underground, with facilities for filling the tank from the surface and a pump with which to force the gasoline from the tank to the automobile gas reservoir. Such a system places the gasoline out of danger from a stray match, and puts it in a place where children cannot tamper with it. A force pump which will be very convenient in transferring the gas from the supply tank to the motor or other receptacle may be purchased at a slight expense.

Tire Economy

By Russell Adams

THERE are five ways in which you can save on tire bills: First, by buying good tires; second, by keeping tires well inflated; third, by using your brakes with caution; fourth, by not overloading your car; fifth, before shedding your car at the end of a run examine your tires and remove tacks, pieces of wire, glass, etc., that have lodged in the rubber tread, for to-morrow they may work their way through to the inner tube and cause an annoying puncture.

I have found it a very unprofitable practice to buy anything but the best tires. There seems to be a misleading idea to the effect that serviceable tires can be bought for much less than the price asked for standard brands. I have tried a few so-called "bargain tires at greatly reduced prices," but if there is any bargain to them it can only be classed as a bad bargain—for the buyer. This class of tires simply will not stand up and give satisfactory service.

Tire upkeep is the most expensive part of car maintenance, and for this reason it pays the driver to give his tires the best attention at all times.

The rear tires of any car support more weight than the front, besides having to bear the strain of pushing the car forward, and for this reason they are subject to more wear than the front ones. I have found it profitable to keep my best tires on the back wheels.

Oil and grease are solvents of rubber, and will quickly ruin the best tire manufactured if allowed to remain on its surface for any length of time.

Besides putting a terrific strain on gear and axles, there is nothing that will wear a tire faster than the sudden locking of the wheels, for that reason a good driver should use his brake with judgment. It is a sure sign of the amateur to see a driver lock his drive wheels when coming to a stop, unless it happens to be a case of absolute necessity. I once ruined a couple of tires by using my service brake, but stopped within six inches of a bewildered little girl who seemed paralyzed with fear.

It is a comforting thing to have an extra tire clamped on the back of your car. I like to have an extra tube along too, for it sometimes come in handy. Extra tires should be protected from light, heat, and dampness by a heavy tire cover. A tire cover does not cost much, and soon pays for itself in tire-saving.

A tire-repair man once told me that almost 90 per cent of all tire trouble is due to under-inflation—that is, by running the car on tires that are too soft. A soft tire, by having its side walls bent at a sharp angle, will soon have its fabric loosened from the rubber, with consequent liability of an early rupture from stone bruises, etc.

I carry a small vulcanizer, which uses a combined heat unit and patch, in my tool box, and it gives perfect satisfaction on tiny punctures, but I have a small steam vulcanizer at home with which I make most of my repairs. It does a first-class job on patches up to 2½ x 3 inches on inner tubes, and is useful in vulcanizing small cuts in casings.

Many miles can be added to the life of an old casing if an inner liner is used; but be sure and do a good job when you put in that liner, for if you leave wrinkles and ridges in the surface you can expect to ruin an inner tube in a very short time. I have little faith in blow-out patches—after a tire has blown out its days of usefulness are numbered.

Do Your Chains Fit?

THIS business of putting on your tire chains is more important than you might think. Care used in fitting them will be rewarded by longer life to tires. In spite of opinions to the contrary, it is poor practice to fit chains in any manner so tightly that they cannot slip a trifle.

After a chain has been used for a time, the gradual wear between the side links will tend to make it looser, and in that case it is well to remove one or two of the links, depending on the amount of play. Only remove as many links as will allow you to bring the connections together without the exertion of more force than can be applied with the hands. This tension is usually sufficient to prevent any part of the chain from hitting the fender.

It is the looseness of the chain that prevents wear on the tire. It is not meant that your chains should be so slack as to run the chance of losing them, but leave enough play so that the cross chains will not hit in the same place on the tire every time the wheel turns.

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A Farm Machinery Syndicate

By J. T. Bartlett

I PRESUME there are farming localities where a general co-operative effort might have little prospect of success, because individualistic spirit is so general, but it is hard to believe that anywhere co-operation in the syndicate form is impractical. Four or five, or seven or eight, or a dozen, or even more, farmers combine loosely for some special purpose. It may be the selling of a single crop, the shipping of which in car lots they can only accomplish by getting together. It may be the purchase of wholesale quantities of concentrates, fertilizers, sacks, boxes, flour, apples, coal, twine, or something else of many things. It may be the joint ownership of special pieces of farm machinery, which owned individually would be excessively expensive, owing to limited annual use. The syndicate, being small in numbers, can generally be formed among several friends. It is in such a subordinate affair, utterly out of proportion to the economies effected, that each member still retains complete business independence.

Sometimes, where economy is an insufficient inducement, convenience may lead several farmers to form a syndicate, and in other cases there may be twin motives.

Here are the special details of a seven-year-old syndicate which has attained no better than average success. The first purchase was a corn binder, six farmers participating. The strain on each mem-

number of days each member uses the equipment.

Rapid recent developments in the farm-machinery field should encourage formation of machinery syndicates. Co-operative ownership of tractors around a member especially capable in tractor care would make far greater efficiency in the use of this piece of power equipment. The farm motor truck developed on a neighborhood basis can hardly fail to be profitable, circumstances being at all favorable. In threshing outfits developments of recent months indicate rapid adoption of small outfits, displacing the "big show" which has so exclusively held the field for years.

Your Iron Chore Boy

By B. H. Wike

THE modern gas engine is a highly efficient and never-tiring helper, capable of adapting itself to almost every known need for power on the farm.

As the first and foremost consideration of gas engines is the means of employing their power, the first thing a farmer or other user needs to know is not only how to make them run, but also to understand the various ways—the best ways—to put them to work. We have seen some gasoline engines standing out in the open,



Tired of waiting their turn, ten Vermilion County, Illinois, farmers organized a threshing ring which has proved very successful

ber's resources was insignificant, yet the benefits were substantial. Later all members built silos. At first, custom silo-filling outfits were depended on, but their service was not entirely satisfactory. Two more farmers went in with the six, and they bought a blower, one of the largest sizes manufactured. They continued for some time, depending on hired power, until the charge struck them as too great. Last fall they bought an engine and a threshing machine for something more than \$1,500.

"We have purchased this equipment for our own convenience," stated one member. "We thresh when we want to, and we fill our silos when we want to. It is one of the rules adopted by the syndicate that the equipment will never be used outside of our own members. The only possible exception would be one of charity."

The present regulations of this syndicate have value as showing the adapting to local circumstances of the special equipment owned. With the corn binder and blower each member contributed an equal share of the cost, and annual expenses were equally divided. When the engine and thresher were purchased it was apparent the same arrangement would be unfair, as some of the members would use the outfit twice as much as others. It happened that the seller of the outfit did not require cash, so that it became practical to adopt a very convenient method of payment, simultaneously recognizing the justice of a pro-rated cost. It was decided that each member should pay \$20 a day for the use of the outfit. This will go into a general fund out of which payments and six per cent interest charges will be met until the equipment is owned outright. Expenses for repairs, etc., are allotted at the end of the season, pro-rated on the

where the owner leaves them through summer and winter, covering them up with some frail covering like a blanket or an old box that leaks. An engine in such a situation is certainly subject to all the direct influences of the weather, and should not be expected to do good work. It should be housed at all times.

A special engine house, with the various adaptations of shafts, pulleys, belts, etc., where the engine can rest bolted down to a solid bed, is the best arrangement of all. Such a house can be built at a place convenient to all power work it is needed for. It is no trouble at all to have the cream separator in a house adjoining the engine-room and then provide a shafting to run this separator. An engine of sufficient power to do several things at once is the most profitable plan, and then so arrange the work that it can operate more than one thing at a time.

There is even a way of having several beds made for one particular type of engine. In this case the engine is wheeled about on its truck to the required place, where a firm bed is ready, bolted down, and then put to work.

In putting up shafting and pulleys, you should know about what speed the pulley is required to run to perform the chosen work satisfactorily. The wood saw will necessarily have to run very swiftly. The fanning mill takes a certain speed, the cream separator another, and the pump still another. It would never do to have them all the same. You can get the required information on all these things from the maker of your engine. They know best what their engines can do. They will be able to suggest valuable economies in other ways of operation, as well as various uses, which you never dreamed of.

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Making Work Count for the Most

By H. H. Haynes

SOME farmers own a farm and work on it. Others own a farm and manage it. The latter works just as much as the former, but in a different way. He works his head along with his hands. He doesn't get up at four o'clock in the morning just because that is the time all farmers are supposed to crawl out. He gets up because he knows that to keep things running smoothly he must be on the job. To get the most efficient labor from the men he employs he must not only direct them, telling them what to do and how to do it, but he also finds it necessary to work with them and take the lead in doing the work. This might not be feasible on large ranches or plantations where the help runs into the hundreds, but on farms like you and I know about it is a mighty good plan.

Plan your work ahead and then keep ahead of the work. If you can plan your farm work and direct your labor so as to get more done than the average, then you are the man who can afford to pay more than the average wages to your help. Good farm labor, or any kind, for that matter, is hard to get; but if you can pay a little more than the other fellow, you get the best help.

Try and make everything handy about the farm so as to make it easier to do the work. A broken or hard-operating gate that is much used will waste a lot of time in the course of a day. An empty water tank when the teams come in at night, hot and tired, means that one or more of the men must spend considerable time on the pump handle, and all because someone forgot to put the windmill in gear. It's not the big things that are forgotten, but the little ones that help the big ones along.

Always have in mind some "rainy-day" jobs. If you can't remember them, put them down in a book. An hour spent in tightening up or repairing a machine may save a ten-hour day if it breaks down in the field. An inside job of grinding or shelling corn on a rainy day, even though the feeder isn't quite empty, might be the means of keeping everything going full blast in the field when the sun is shining. Making hay when the sun shines is only possible by seeing that odd jobs are done when it rains.

As far as possible, the man power you employ should be cut down by machinery. A gang plow and six horses and one driver will do just as much in a day as two sulkies with three horses and a driver each. You could just as well save the cost of that one man. Two two-row cultivators will efficiently cover as much ground as four one-row machines, and by using them you have saved two men and two horses. Your overhead is reduced in proportion to the size of machine one man can handle.

Many farmers saved labor last fall by harvesting corn and soy beans with hogs. In this way they needed no help to pick the corn, nor to cut and thresh the beans. And the method isn't wasteful, either. I have tried it, and I defy anyone to find an ear of corn left in the field after hogging down.

Headwork is just as necessary to the man who operates a farm as it is to the man who sits at a desk and runs a railroad. You must map out your line of work, and then gather about you help that will efficiently carry out your plans.

Maybe You Waste Time

By Earl Rogers (Ohio)

IT LOOKS to me sometimes as if a farm efficiency expert could be about as useful a man as ever was. We have such men in our county agents, but they have too much territory to cover. We all do our work with too many steps. I know I do. I think about what I am doing, yet at times I find myself going at chores or other work in a way that takes many more steps than it should.

Many times a few nails, a gate repaired, or a door put on its track would save time and labor, but we can't take the time to do it.

Some time ago I watched a farmer feed 16 head of horses. At the end of the barn there was a vacant stall where the oats was kept. He made a trip to the end of the barn every time he fed a horse. I didn't ask him why he didn't take a bushel of oats along with him and feed the 16 horses with two or three trips, or why he didn't use a wheelbarrow to take the oats along with him. I wonder if he ever thought of that?

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Established 1882



What About Farm Labor?

[CONTINUED FROM PAGE 5]

families and more and better machinery took charge of the case. The labor that was free to be hired was to be found only here and there. And that labor, for the most part, was made up of "left-overs," or the "back wash," as the British farmers used to class this sort of help. Rather than bother with it the farmers went on with their own—and arrived.

Nor did the farmers get excited over all that war-born sacrifice that there was sufficient surplus labor in the cities to make good the deficiencies on the land. Many of our pseudo-economists and quack practitioners on economic maladies would have had us believe that so long as a man had a sound body he could do farm work. But the farmer never believed it. He had tried this class of labor before, and paid it off before the end of the week. It lost time, wasted money and material, wrecked machinery and ran up production costs to the fatal-fever mark. The farmer was disgusted with this propaganda—is now. Nobody need try to "discover" this untapped source of farm labor for a solution of the present problem.

Many have advanced the theory that one sure way to clear up the mists veiling the farm-labor outlook is to have the War Department recall from active military duty all men who have been taken from the farms. This sounds reasonable, but it isn't practical. Let the War Department tell Dick Jones with the American Army of Occupation in Germany that he is coming back to America because he's needed on a farm, and immediately Harry Smith, his bunkie, will wonder why the Sam Hill he isn't allowed to go back to his old job in the shoe factory. Such a program would demoralize our forces, and it would take the General Staff of the Allies to make peace in the ranks.

Just Any Farmhand Won't Do

Now, the farmers do want their sons and cousins and brothers back on the farms—I've talked with a lot of them lately—and they're hoping they won't have to wait much longer. But here's an interesting thing, and an encouraging thing as well: Much of the apparent labor dearth on farms can't be filled by any good farmhand, simply because the men in charge of those farms are holding those vacancies open for the men who will come back to them with stripes on their sleeves. The men who gave up these jobs to go to the war are going to have the same jobs back, and nobody else need apply.

You can take all the statistics you want, but they'll never reveal this factor. This farm-labor problem is going to be solved just as much by the personal equation as by mathematical units. And on these personal-equation lines the labor problems of the future will be solved. If our Government had been up and doing instead of molding in theory for a good many years, these critical moments in the agriculture of America would not arise to find us so utterly unprepared to meet them.

Let me get at this a bit slowly by saying now that one of the chief activities of the Federal Office of Farm Management, which has charge of the Department of Agriculture's farm-labor activities at this moment, is the education of laborers and consumers alike in what it means to produce food.

This may sound offhand like a far-away cry from the solution of the present labor problems, but it's at the bottom of the only one.

The Office of Farm Management has what is known as a state labor specialist in nearly every State in the Union. He works through state extension departments and other agencies. His chief work right now is to give farmers the results of the best investigational work of the Office along the line of efficiency and economical crop production.

This, of course, is the best data on the use of machinery, horses, and man power; the most efficient systems of crop rotation, and the like. It's showing how to do the most with the means at hand.

He also is investigating and spreading facts about the relationship between prices of farm crops and farm wages. How many men know when wheat is a dollar ten what a farmer can afford to pay for the labor to grow it? How many men know how much he can afford to raise the farm wage when wheat is standing at two-twenty?

Nobody knows unless he knows what it

costs to raise a bushel of wheat in his particular section, with its own special physical and economic conditions.

How many laborers know that it often is better to work on a farm for \$3 a day than to work in the city for a good deal more? The only ones who know this are those who know what the farm furnishes free—a house, food, fuel, and the like. And few know what it costs the farmer to furnish these, and that he can furnish them cheaper than any other employer.

The Federal Office of Farm Management knows these things, because it has had a corps of experts at work in the fields for years gathering the figures. And we'll come back later in this story to the significance of these in relation to the labor problem.

Another factor: What is going to be done about the uneconomic distribution of farm labor throughout the twelve months in the year? On some farms in Maryland, say, growing nothing but tobacco, there's absolutely nothing for the labor, so badly needed in summer, to do in winter. This labor drifts about from farm to farm back to the cities, upsetting the balance there. What's to be done with the labor drifting willy-nilly after the great Western wheat harvests?

Stabilize labor by giving it steady employment. The farmers know that is the answer. They're sick and tired of the "drifter" hand. The drifter is sick and tired of drifting. He upsets labor-supply balances in the cities in winter, often he leaves the farm in the fall to join the city bread line. He's an unplaced, disturbing factor. But it is not his fault.

Now, in Maryland, for example, again, the representative of the Federal Office of Farm Management has just about convinced one of the big tobacco manufacturing companies that it would pay them to establish certain branches of their manufacturing activities in the tobacco-growing sections of the State. When the labor left the fields after growing the crop, they would find immediate employment at shed work of this company; then the farmers would know they could count on it next season.

In Maine the labor that finds steady employment on the farms in summer takes to the woods in winter, and works at logging, to return to the farms in spring.

This work is going on, and is the only work which is destined to work out the ultimate solution of the farm-labor problem. Along with it there is the tremendous factor of educating the public in the matter of crop-production costs. If we understood these, half our labor troubles would cease.

The consumer watches the price of shoes rise 100 per cent, smiles and pays the bill. If milk advances a cent a quart, there is a nation-wide bellow that the farmers are robbing the public, which will go to utmost excesses in paying for luxuries and go into fits because the prices of foods take a legitimate climb.

When the public itself beats down prices that are legitimate and based on production costs, it automatically causes the farmer to retrench. He can't pay labor as much if he isn't going to get a just price for labor product. And so farm wages drop, labor gets dissatisfied and leaves, and—bingo!—we're in a mess again.

Do We Know Production Costs?

A farmer drove up to a little country store last Christmas in South Carolina and exhibited a load of turkeys he had raised. He didn't know just what it had cost him to raise them, but he had an instinctive feeling that if he sold them for less than 30 cents a pound he would lose money. So he set 30 cents as the price.

There was a little band of lower-the-cost-of-living zealots in that community who were looking for something to scalp. They discovered this man with the turkeys and immediately surrounded him. They informed him that they would not pay 30 cents, that he was a highbinder—what did it cost him to raise that meat, anyway?

He couldn't answer because he didn't know. In disgust he drove off with the lot. When he got back home he reflected that there was no use raising any more turkeys—people wouldn't pay a fair price for them. Ignorance of production costs on the part of both consumers and the producer made hard feeling, and to the extent of that man's operation curtailed production.

As a matter of fact, that man more likely

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than not raised those turkeys at a cost of 30 cents a pound.

Isn't it perfectly plain that before farm labor can be paid wages competing with industrial wages in normal times, and thus secure for our farms an adequate supply of labor, we must know what it costs to produce farm crops? Isn't it plain that the quickest, surest way to make peace between consumers and producers of farm crops is to let consumers realize what it means in labor, investment, and operating costs to grow a bushel of wheat or a pound of beef?

Publicity of milk-production costs has done more to put our dairy industry right with the public than any panacea yet experimented with. Nearly everybody knows now that dairymen haven't been profiteering, and that the recent rises in prices of dairy products were justifiable.

When the packers' "trust" is attacked by Congress, what does it do? It tells you and me just what it costs them to put a pound of sirloin in a refrigerator car, and what its profits on that pound amount to.

But the farmer's products—well, nobody knows what it costs to produce them. We have a gigantic national Department of Agriculture with an annual appropriation of \$30,000,000 a year. It ought to know about these things. Does it?

Yes and no. The Office of Farm Management is the machinery which collects these vital figures. It has collected a great many. It could have collected many more but for opposition within the Department itself.

Farmers might as well know the truth about this. In its attack on the labor problem the Office of Farm Management views the problem in no small-caliber fashion. It is working on the premise that big, vital facts and broadcast education of consumers, laborers, and farmers themselves are necessary before we can attempt to stabilize this too unsteady factor in our national economic life.

We Must Have the Figures

Very well, these farm-crop production-cost figures are what we need and what the Office of Farm Management has been trying to get. But the Secretary of Agriculture's Office, according to a former chief of the Office of Farm Management, has handicapped this office time and again under the administration of the present Secretary. Without going into details—which, incidentally, would make interesting reading—it seems to have been the overpowering ambition of certain influences high in official circles of the Department to "get" the Office of Farm Management.

When last August the Chief of the Office of Farm Management was asked to appear before the Senate Committee on Agriculture to give information in the cost of producing wheat and beef, the country—such part as took notice of the affair—witnessed the spectacle of the Secretary's Office publicly announcing that the cost figures accumulated by the Office of Farm Management were untrustworthy, that the methods of arriving at them were faulty, to say the least.

This would have been a commendable move on the part of the Secretary's Office if it were a move based on fact and not on theory. Certainly, had these charges been true the whole works in the offending office should have been fired the next day.

But nobody was fired. Instead, the Secretary's Office informed Congress that it would get to work and design an altogether new machine and method for collecting these figures—one on which the country could depend.

To make a long story short, it did so, and, to make a complete job of it, submitted this plan to the American Farm Management Association, the final court of appeals on such a question. The Association in official session examined the plan and shot it so full of holes that the least we can say is that it was humiliating.

In the face of these unmistakable expressions of public opinion, it is hard to see why now the Department of Agriculture can dare to block and heckle and discourage one of its most efficient and nationally valuable arms of service. It's gone far enough as it is. A little more truth and light spread by printer's ink will check any renewal of this game in the Department.

In the meantime the Office of Farm Management is working on this farm-labor problem in a clear-headed, far-sighted way. It would have made greater progress had it not been blocked so often by the very Department which claims to champion it.

Let us bear these facts in mind and watch what happens.



The Motor Advance

THE farm world is rapidly becoming powerized. Each year for four years the number of tractors sold has actually doubled. And 1919 will see another quarter million on the farms. The tide of motor power—tractor, truck, and engine—has swept across the land with great speed and no man can stand entirely clear of the energy that carries it on.

Whether you are ready now, or not, for motor power, you will be wise to heed this point: Be sure the new machines you buy are built with the power trend in mind.

The Harvester Company has since the beginning built successful tractors, and all its lines of machines have been made to keep pace. When you buy International machines to work

with your horses, you are also buying machines that will need no changes to be ready for the kerosene power you may decide to buy on any day in the future.

Consider again the serious matter of tractor hitches which has perplexed so many farmers. It need never be a snag for you to stumble on—if your new machines are International-made. Much careful study and designing has solved the many hitch problems and made these machines horse-and-tractor-interchangeable.

Many American farmers at the front have seen and grown familiar with the advance in motor hauling and motor fighting. Returning—they face a future, and most of them a present, of motor farming. Below are Harvester machines for the farmer of today:

Practically every farm machine in the list below needs power for its operation. Whether needed at drawbar or belt, that power can be furnished at lowest cost by an International, Mogul or Titan Kerosene Tractor, or an International Kerosene Engine. Your dealer can show you why this is true. See him, or write us for full information.

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Tillage Implements Disk Harrows Cultivators Tractor Harrows Spring-Tooth Harrows Peg-Tooth Harrows Orchard Harrows	Belt Machines Ensilage Cutters Husk and Shredders Corn Shellers Hay Presses Stone Burr Mills	Corn Machines Planters Cultivators Motor Cultivators Binders Ensilage Cutters Shellers Husk and Shredders	Other Farm Equipment Manure Spreaders Straw Spreading Attach. Farm Wagons Farm Trucks Stalk Cutters Tractor Hitches Knife Grinders Binder Twine
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Guarding the Rain Water

By B. H. Wike

THERE is perhaps no greater blessing known to households than having good water. There are various methods of water supply, but one of the most common and convenient ways is to have it in a cistern. As a reservoir the cistern is subject to contamination in several ways, and in ways that are often overlooked by the owner.

We take it that all cisterns have their supply of water regulated by a cut-off in the spout above the curb, which is in turn operated by the owner. The roofs of houses gather more filth than we realize. Some of this filth may be classified as bird droppings, insects, either alive or dead, molding leaves, dust, etc. Once in a while you will find a mouse going its way into the cistern.

It would be a good thing for all inlets to pass their waters through a filter before entering. A filter could easily be constructed, and would call for a chamber either of galvanized material or proofed wood filled with sand and charcoal arranged in alternate layers, with strainers to assist or to hold the ingredients from running away with the water. In conjunction with the filter a careful and reasonable use of the cut-off should keep the water free of anything coming from the roof or the eaves.

Some other conditions that assist in making a cistern secure against contamination are proper ventilation of the water reservoir and protection against the entrance of anything like dirt, insects, or small animals, such as mice or rats. There should be a strong screen between the platform and the curb to allow air to pass, as well as screen-protected tubes on opposite sides of the curb high enough to keep the water from flowing out but allowing air to come through. This should supply plenty of ventilation. Moreover, the walls and bottom of the cistern should all be well plastered, and be investigated whenever the cistern is drained for cleaning. A small amount of slaked lime can be dropped in at times to disinfect the water. The lime may cause the water to be rather "hard" for a few days, but this condition soon passes.

Locations so often regulate the construction of platforms that it is next to impossible to name any one particular material for their construction, but for an all-purpose platform we believe there is nothing that can beat concrete. A concrete platform, unlike wood, will not allow dirt to drop into the cistern. The opening at the top should be large enough to admit an ordinary-sized man when the cistern is to be cleaned.

The edge of the opening should be provided with a sort of elevation over which the upper curb may sit to prevent the flowing of any surface water into the cistern from the platform. All these things can be regulated if the owner is serious enough to look into the matter and really wants to keep his cistern water at its best.

Handy Hints for Building

By E. V. Laughlin (Iowa)

EACH hundred square feet of roof will require approximately four bundles of shingles.

Each yard of gravel to make a 5 to 1 mixture of concrete will require four sacks of cement.

To figure the number of loads of gravel (each load assumed to be a cubic yard) necessary to put in a foundation, multiply the entire distance around the wall, plus the length of the cross walls—if there happen to be cross walls—in feet, by the height in feet, by the thickness of the wall in feet, and divide by 27. To the result it is always advisable to add about 10 per cent for waste and good measure.

One full bundle of lath will cover about three square yards of wall or ceiling.

In figuring the number of brick required for veneering a building, multiply the exterior surface of the building in square feet by 7. My own practice is to subtract from the exterior surface of the building the area of the windows and doors, because veneering does not waste bricks.

To determine the number of feet of flooring required for a room multiply its length by its breadth and add one-fourth of this area to itself. The sum will be very nearly the number of feet required.

One barrel of lime will make mortar for 1,000 bricks. Practically a load of sand will be needed for the same.

Old barbed wire makes splendid reinforcing for concrete.

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LOOK at the Money I Saved These Men on Fence & Ready Roofing

Chas. Rowe, Stella, Mo., saved \$56 on one order. J. Simpson, of Custer, Ill., saved \$63 on his order. N. Leggett, Boulder, Col., saved \$60 on one order.

Every mail brings me letters like these from satisfied customers telling of the money I saved them. Over 600,000 farmers have found that buying

BROWN FENCE & READY ROOFING

on my Direct-from-Factory-Freight-Paid Plan saves them big money. Not only are my prices lower, but the high quality of Brown Fence—which is made of genuine Basic Open Hearth wire, heavily galvanized—and Ready Roofing, made from best quality wool felt and asphalt—insure longer life and less repair cost. If you need Fencing or Ready Roofing, don't fail to

Send for Free Catalog

You will be agreeably surprised at the big saving you can make by buying direct from my factory. Write today and get my catalog of rock-bottom prices—see the money I can save you.

JIM BROWN SELLS DIRECT FROM FACTORY TO YOU

The Brown Fence & Wire Co.
Dept. N,
Cleveland
Ohio

MOREAU'S KODAK FINISHING SERVICE

SPECIAL OFFER

We finish 6 exposure roll (one only) and furnish 6 select prints for 25c with order. Try us. Money back if dissatisfied.

662 Nicollet Ave., Minneapolis, Minn.

WRITE GALLOWAY

Save \$25 to \$250

Compare Galloway's prices on Gasoline Engines, Cream Separators, Manure Spreaders, and other Implements. See how much Galloway saves you.

Buy Implements DIRECT!

That's the way the close buying business farmer today buys Implements. He has Galloway's Catalog on his desk and saves money, by buying direct from Galloway at factory prices.

BUY NOW—Pay Next Fall

Get the Implement you need for work now and pay after Harvest. Your choice of five easy buying plans with long terms. Over 800,000 satisfied customers—many your next door neighbor—prove the merit of Galloway Direct-to-you method.

BIG BOOK SENT FREE

Write at once for latest 1919 edition of Galloway's "Divide-the-melon-money-saving-Implement Book and mention interest in." Close by shipping points save you on freight.

WM. GALLOWAY CO.
397 Waterloo Station, Waterloo, Iowa



HARVEY KALEY

"Footwork!"
—that's the Secret of my success—

HARVEY KALEY, one of our most successful salesmen, has no illusions about success—we pay him a big salary, weekly, and he says he earns it by "Footwork." By that he means earnest, conscientious effort—getting over the ground.

We have several openings in our sales organization for other men of Mr. Kaley's type. If you are willing to exchange "Footwork" for a salary of from \$35 to \$50 weekly, clip the coupon below and mail it to-day.

Sales Manager
FARM AND FIRESIDE, Springfield, Ohio

Sales Manager
Farm and Fireside, Springfield, Ohio
Please tell me how I can turn "Footwork" into money.

Name

Post Office

State

How I Save on Roofing

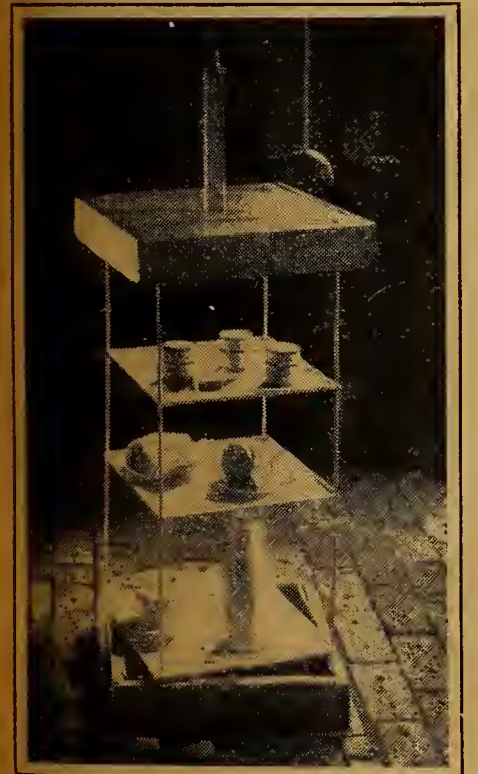
By F. T. MacFeely (Indiana)

"NEARLY every year I used to have an old shed or outbuilding that needed repairing," says A. C. Huffman of Indiana. "This was especially true of the roofs, which I noticed were the first thing to go. It seemed to me that I had more leaky roofs than any other man in the country, and I always had some extra expense in the way of roofing. But I have now found a way to overcome this trouble and get my leaky roofs repaired at a much lower cost. "If the building happens to be an old one I never go to the expense of putting on shingles or galvanized iron roofing, because they are too costly. The plain sheet-iron roofings that are not galvanized are not satisfactory in the way of service. After several years of experience with various roofings, I have discovered that the prepared roofings are the most serviceable of any, besides being much cheaper. "When I apply this prepared roofing I never take the trouble to tear off the old roof first, because I have found it to be much easier and much more desirable to lay the new roofing right over the old one. I cut the roofing into strips so they are convenient to handle, and I allow enough in the length so they can be turned down at the ends. I then cement them at the laps with roofing cement, and also nail wooden strips, called battens, over these laps, making them more solid.

An Iceless Refrigerator

By E. M. Mudge

FOR the benefit of those who live where ice is not available a description of our iceless refrigerator might be helpful. It is constructed in the floor of the cellar, and is 30 inches below the brick surface, and about 20 inches square. First a wooden box is sunk to the required depth below the cellar floor, and a zinc tank made to fit rather loosely in this box, coming up even with the top. As you



will notice from the illustration, the trays are fastened to corner rods, which extend up through the top or cover of the tank. A rope, pulley, and weight of proper size complete the outfit. The corner rods holding the trays should be a trifle shorter than the tank is deep, so that when the trays are let down the cover will rest on top of the wooden box, which is allowed to project four or five inches above the brick floor, allowing the flange of the cover to come down around it. A back shed off from the kitchen would be a much better place in which to make an arrangement of this kind. Simply cut a hole through the floor, dig at least six feet below the surface, and make the balance of the refrigerator the same as above, allowing the cover to rest just even with the floor in the shed. Attach a rope and pulley to ceiling and you will not have to go down cellar at all. On May 1, 1917, the temperature immediately on top of the cellar floor and at the bottom of the pit was just equal—46 degrees. Toward the close of July, after a long hot spell, the temperature near the bottom of pit rose to nearly 60 degrees, and then slowly began to grow cooler.



Why Is a Cow Like a Gallon of Paint?

A \$200 cow will eat no more than a \$100 cow, but will give more pounds of milk.

Though paint made of Dutch Boy White-Lead and linseed oil may cost a little more per gallon, it will cover more surface, protect it better, last longer, and require no more labor to spread than will an inferior paint.

Good paint is true economy just as surely as a good cow. Dutch Boy White-Lead lowers the cost of keeping properly painted.

Dutch Boy White-Lead can be tinted any color.

Write our nearest office for "Handy Book on Painting."

NATIONAL LEAD COMPANY
New York, Chicago, Boston, Buffalo, Cincinnati, Cleveland, St. Louis, San Francisco
JOHN T. LEWIS & BROS. CO., Philadelphia
NATIONAL LEAD & OIL CO., Pittsburgh

Dutch Boy Products

Shear With Machine

Old ways of shearing leave too much wool on the sheep. Wool is scarce and commands high prices. Buy that sheep shearing machine NOW—they're going to be scarce this season. Get a Stewart No. 9 Ball Bearing Machine with 4 sets of knives. Price only \$14. If your dealer can't supply you, send us his name. Write for 1919 catalog.

CHICAGO FLEXIBLE SHAFT COMPANY
Dept. B 140, 12th St. and Central Ave. Chicago, Ill.

FENCE

Direct to Farmer at Wire Mill Prices

CATALOG FREE
KITSLMAN BROS. DEPT. 271 MUNCIE, INDIANA

ORNAMENTAL FENCE

6 Cents per Foot and up. Costs less than wood. 40 designs. All steel. For Lawns, Churches and Cemeteries. Write for free Catalog and Special Prices.

Kokomo Fence Machine Co. 427 North St. Kokomo, Ind.

OTTAWA KEROSENE ENGINES

Start Easy in any weather. Pull steady. Carry big overload. All sizes and styles. 1½ H.P. to 22 H.P. 90 Days' Trial. Money Back Guarantee. Prompt shipment.

Low Prices Write for present money saving prices and Free Book, telling all you want to know about engines. Write today.

OTTAWA MFG. CO. 1153 King Street, OTTAWA, KANS.

It is to your interest to mention Farm and Fireside in answering advertisements.

\$19.95 ON TRIAL

American FULLY GUARANTEED CREAM SEPARATOR

A Solid Proposition to send new, well made, easy running, perfect skimming separator for \$19.95. Skims warm or cold milk; heavy or light cream. Different from picture, which shows larger capacity machines. See our plan of MONTHLY PAYMENTS

Bowl a sanitary marvel easily cleaned. Whether dairy is large or small, write for free catalog and monthly payment plan. Western orders filled from western points.

AMERICAN SEPARATOR CO.
Box 4058 Bainbridge, N. Y.



Why does Swift & Company sell poultry, eggs, and butter?

For the same reason, Mr. Farmer, that your R. F. D. postman now brings your packages as well as your letters.

He used to bring only letters; but since he makes his rounds every day and has the necessary rig or "flivver," Uncle Sam decided to use more fully his time and equipment by handling parcels.

Years ago Swift & Company built up a nation-wide distributing organization, including thousands of refrigerator cars and hundreds of branch houses with refrigerator equipment, for the marketing of meats. And none of this equipment was being used to maximum capacity.

What more natural than that Swift & Company should take on other perishable products, such as poultry, butter, and eggs?

Also—those products are sold by the same salesmen that sell our meats; they are hauled in the same delivery wagons; the same clerks make out the bills; and they go to the same class of retail dealers.

Also—these retailers are equipped to handle perishable products and want to be able to buy poultry, butter, and eggs, of us. And consumers like to buy them from the same retailer that sells meat.

As a result, our vast organization is more economically utilized—and at the same time we render a valuable service to you, Mr. Farmer.

We make the cash market for your poultry, butter, and eggs more steady.

We broaden the outlet for your goods, because our organization reaches every important consuming center in the country.

Swift & Company, U. S. A.

Established 1868

A nation-wide organization owned by more than 25,000 stockholders



Boys! We Will Trade This Watch for a Little of Your Time

This is just the kind of a watch you have always wanted. Nickel-plated—stem-wind and set—Guaranteed satisfactory by *Farm and Fireside*. You can have it—if you are willing to *work* instead of *wish* for it.

Begin Right NOW

Get eight friends to order *Farm and Fireside*, one year each. Collect 25c for each subscription. Send us the money, and the names and addresses—and your watch comes by prepaid post. Show your copy of *Farm and Fireside*. This makes it easy to get subscriptions. Send the coupon if you want additional information. Address:

The Watch Club
Farm and Fireside Springfield, Ohio



The Watch Club, F.F. 4-19
Farm and Fireside, Springfield, Ohio
Please tell me how I can earn a watch.

Name

P. O.

St. State

Why I Pay the Honest Grower More

[CONTINUED FROM PAGE 11]

the fruit business, the retailer is the infantryman.

Only one word will be said for the wholesale dealer in the big market centers. When you are dealing with one who has treated you fairly in a series of transactions, be not easily persuaded to leave him for the untried merchant who offers fancy promises. Generally, it is the part of wisdom to stick to the old friend.

I hope none of my friends will take offense when I say that fruit growers of the East and Middle West, especially, can profitably adapt to their own requirements the method of some of the largest and most successful growers of oranges both in California and Florida. They have overcome handicaps the like of which the Eastern fruit grower never has encountered, and they have approached what seems like a narrow line this side of perfection. These are trade-mark oranges, for example, that have become well known not only in the fruit trade but also in the household throughout the country. This fruit is selected and packed with the highest degree of intelligence, skill, and care. The packer observes scrupulously the little details of nicety. The sorting for size and quality could not more nearly approach perfection, and the same standard is in force day after day.

The possibilities for the development of the fruit-growing business in the East and Middle West are unlimited for men who know the rudiments of the game, who are willing to learn more, who can command the capital, and who have the courage.

In the annual report of Charles S. Wilson, commissioner of agriculture of New York State, just issued, the rather surprising statement is made that New York produced practically as many apples in 1918 as were produced in all the States west of the Mississippi River. It is well known that it was a big apple year, not only in New York, but also in the States adjacent to it. Bear in mind that this fruit is right in the dooryard of the big Eastern markets, much of it within trucking distance of New York. Remember, also, that apples are among the very best products provided by nature for man.

There are details in the fruit and vegetable business which will readily suggest themselves. Growers will do well, of course, to study these details. But in the study of details it is my conviction that it would be the extreme of folly to overlook the big factor I have tried to emphasize.

Observe the customary business routine. Send invoices. File letters. Keep book accounts fully and accurately. Preserve bills of lading and forward the duplicates. Use printed stationery. Answer letters promptly. Have a telephone. Use the telegraph when necessary. Be alert to see that shipments go forward without delay. Keep your temper. Make friends.

And, after all, that gets us back to the place of beginning, the one big factor in the whole proposition—co-operation.

A Father Who Gave His Boys a Chance

[CONTINUED FROM PAGE 10]

De Kol Lyons, of their own raising. The bull's seven nearest dams averaged 29 pounds of butter in seven days.

The boys have developed into astute business men. For evidence witness what they said when I asked them why they selected Holsteins!

"We looked over all of the dairy breeds before buying an animal. Finally we concluded to buy Holsteins because they held all the world's records in milk and butter production, and their milk is always valuable. The size and thriftiness of the breed, too, helped convince us, for this country is adapted only to rugged stock. Besides, we don't grow much grain, and we couldn't afford to buy much. Therefore, the stock we would buy must be able to consume lots of rough feeds, and produce a maximum of milk with a minimum of grain."

"Our income from the farm last year was \$5,200. This was made up from the sale of potatoes, cream, hogs, and calves. Our milk checks from November of this year until next June will amount to \$250 to \$300 a month. We generally get about 95 cents a hundred for skim milk by feeding it to our hogs. We market about 50 hogs a

year, raising them in the fall and winter, when our cows are fresh.

"Records are one of our aims. In the first place they tell what the cow is doing, and if she has a very good record it makes her calves all the more valuable. It is a business proposition with us all the way through.

"We generally feed one pound of grain to five pounds of milk. We give them all of the clover and silage they will eat, with a ration of bran, oats, oil meal, and cottonseed meal.

"Our methods differ from those of other farmers and breeders, but we have made money. What we did was to pick out from other men's methods the things we thought best. We combined them all, and then changed them to meet our ideas. The results you see in the field.

"Weight generally is considered a secondary consideration in dairy cattle. However, we like to have our cows big and stretchy, carrying plenty of weight. To our way of thinking this means bigger calves, and the cows produce a maximum of milk, but not at the expense of their bodily health and flesh.

"We generally try to put 100 pounds a month on our calves, especially the bulls. Keep the calves growing and they will mature early. Perhaps this is responsible for the early freshening of our heifers. Generally they freshen at two years of age."

Whenever students of the county high school have work in dairying they visit the Hillside Stock Farm. The Augustines help students as much as possible, and bring in all of their stock for judging. At farmers' institutes, and the like, a few of the Augustine cows are always used in the exhibits and demonstrations, and the boys take great pride in showing their cattle at the annual picnic of the county.

There is a lesson in the experience of these boys. Farmers with sons may do well to think it over. Perhaps their sons can be equally as successful if given the chance. Youth is a wonderful thing, and one cannot tell what the boy has in mind.

Foals from Work Mares

By A. M. Paterson

MOST farmers would say offhand that a foal grows a little faster if the mare and the foal run in the pasture all summer. In practice, however, it is found that the foals of work mares often outgrow those of the idle mares. The work mare's foal is given better care, and that is probably the secret, as the foal that runs out all the time is apt to be neglected. It usually gets no grain until about weaning time or afterward, and it is exposed to the daily torment of blood-sucking flies.

On the other hand, the work mare's foal is generally shut up in a partially darkened box stall by day, so as to be handy for suckling the mare at noon, and for the further reason of keeping it from trying to break through barbed-wire fences in trying to reach the mare.

The dark stall keeps the flies away. At night the mare and foal are turned together in the pasture, where the youngster runs and plays, and thus gets the necessary exercise. The work mare's foal is also handy at the barn three times a day when the other horses are fed, and it naturally comes in for its share of oats.

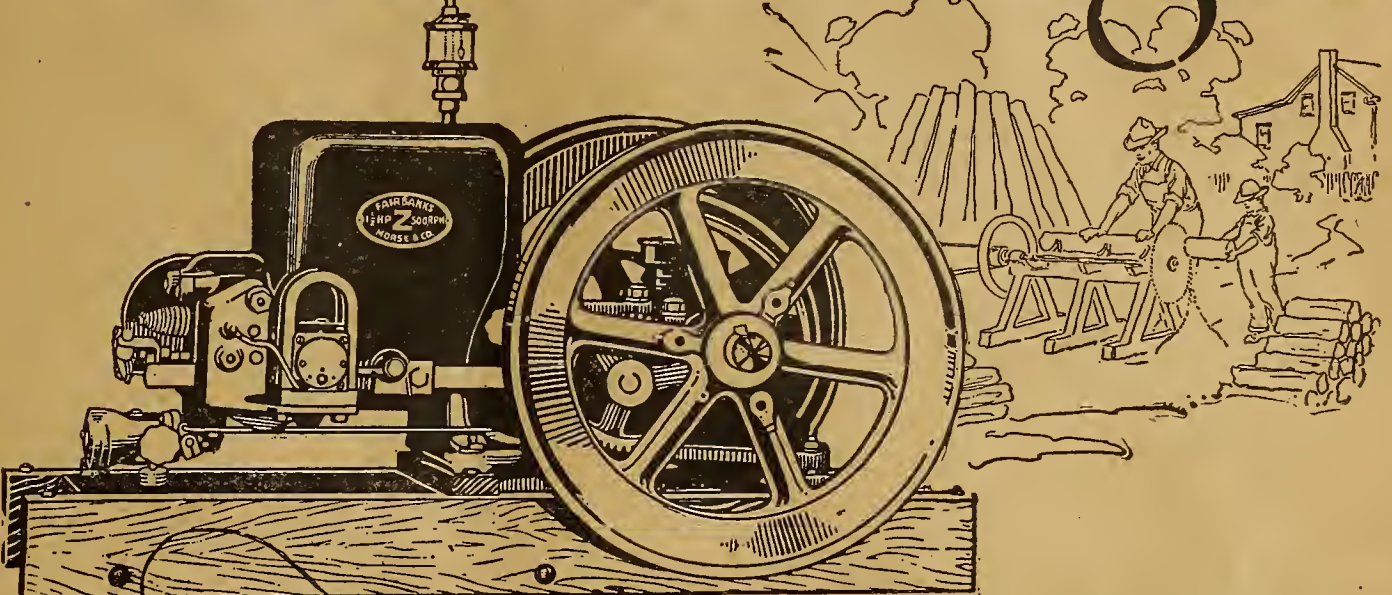
Doubtless the idle mare supplies her foal with the greater flow of milk, but the practical outcome is that her foal frequently does not grow so fast as the theoretically less favored work mare's foal.

Let us work the mares and feed the foals. It is not nature's way, but we are not doing things according to the undisturbed natural procedure when we farm high-priced land to the limit of production. We keep horses for the work they do. We know the horses that do the farm work can also reproduce, and thus replace themselves and supply a surplus of horse-power for sale. If one farmer manages it successfully, so can another.

We will eventually weed out the mares and the families of mares that prove to be shy breeders when subjected to the constant and strenuous exercise which farm work imposes. We will discard one by one the mares which habitually lose their foals because of hard work during pregnancy.

Farmers will gradually learn of the limitations of safety in working in-foal mares. But the absolute economy in working brood mares, and the profit from breeding work mares, will certainly bring the horse-breeding business in America to this practical and satisfactory basis, and selection will eliminate the mares that do not fit the system.

A New Fifteen Million Dollar Engine



FIFTEEN million dollars worth of "Z" Engines are on over 200,000 farms—proving a remarkable engine service. The new 1½ H. P. "Z"—just perfected—completes a line of **KEROSENE** engines—1½ H. P. to 15 H. P.—all of which merit the keenest interest of every farmer. The rare combination of scientific design—fool-proof construction—efficient operation—lowest possible fuel cost—certainly establishes the supremacy of the "Z". Go to your dealer—see the "Z"—then you'll quickly learn why progressive dealers feature the "Z" line after comparing it with all others.

Also runs on
Distillate
Coal Oil
Tops or
Gasoline

Throttling Governor—Built-In Oscillating Magneto

Prices, 1½ H. P. \$61.00—3 H. P. \$100.00
6 H. P. \$179.00
F. O. B. Factory

Fairbanks, Morse & Co.

MANUFACTURERS CHICAGO

STATEMENT of the ownership, management, circulation, etc., required by the act of Congress of August 24, 1912, of Farm and Fireside, published monthly at Springfield, Ohio, for April 1, 1919. State of New York, County of New York—ss.: Before me, a notary public in and for the State and county aforesaid, personally appeared Walter H. Brown, who, having been duly sworn according to law, deposes and says that he is the Assistant Treasurer of The Crowell Publishing Company and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit: 1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, The Crowell Publishing Company, Springfield, Ohio; Editor, George Martin, 381 Fourth Avenue, New York, N. Y.; General Manager, George D. Buckley, 381 Fourth Avenue, New York, N. Y.; 2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) American Lithographic Co., New York, N. Y.; Wm. P. Bonbright & Co., New York, N. Y.; Denny Pomroy & Co., New York, N. Y.; Louis Ettlinger, New York, N. Y.; Ella Gardner Hazen, New York, N. Y.; George H. Hazen, New York, N. Y.; Joseph P. Knapp, New York, N. Y.; Florence Lamont, New York, N. Y.; Arthur H. Lockett, New York, N. Y.; Antoinette K. Milliken, New York, N. Y.; John S. Phillips, New York, N. Y.; Pomroy Bros., New York, N. Y.; Ida M. Tarbell, New York, N. Y.; J. Walter Thompson, New York, N. Y.; Irwin Untermeyer, New York, N. Y.; Alvin Untermeyer, New York, N. Y.; Trustees for Irene Meyers Richter, New York, N. Y.; Wm. Watt, New York, N. Y.; 3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None. 4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him. 5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is—(This information is required from daily publications only.) The Crowell Publishing Company, Walter H. Brown, Assistant Treasurer. Sworn to and subscribed before me this 1st day of April, 1919. (Seal) Mary B. Lambkin. (My commission expires March 30, 1921.) NOTE.—This statement must be made in duplicate and both copies delivered by the publisher to the postmaster, who shall send one copy to the Third Assistant Postmaster General (Division of Classification), Washington, D. C., and retain the other copy in the files of the post office. The publisher must publish a copy of this statement in the second issue printed next after its filing.

Western Canada's "Horn of Plenty" Offers You Health & Wealth



Western Canada for years has helped to feed the world—the same responsibility of production still rests upon her. While high prices for Grain, Cattle and Sheep are sure to remain, price of land is much below its value. Land capable of yielding 20 to 45 bushels of wheat to the acre can be had on easy terms at from \$15 to \$30 per acre—good grazing land at much less. Many farms paid for from a single year's crop. Raising cattle, sheep and hogs brings equal success. The Government encourages farming and stock raising. Railway and Land Co.'s offer unusual inducements to Home Seekers. Farms may be stocked by loans at moderate interest. Western Canada offers low taxation, good markets and shipping; free schools, churches and healthful climate. For particulars as to reduced railway rates, location of land, illustrated literature, etc., apply to Supt. of Immig., Ottawa, Can., or F. A. HARRISON, 200 N. Second St., Harrisburg, Pa. O. G. RUTLEDGE, 301 E. Genesee St., Syracuse, N. Y. W. S. NETHERY, Interurban Bldg., Columbus, O. C. J. BROUGHTON, 112 W. Adams St., Chicago, Ill. GEORGE A. HALL, 123 Second St., Milwaukee, Wis. R. A. GARRETT, 311 Jackson St., St. Paul, Minn. Canadian Gov't Agents



Thresh Your Own Grain AND YOUR NEIGHBORS, IF YOU WISH

THE Huber Junior Thresher and a 12-25 tractor equip you to thresh your own grain with your own men whenever it is most convenient. Your crop is always safe from sprouting if the season is wet, or from shelling out if the season is dry. You can thresh when you *should* thresh.

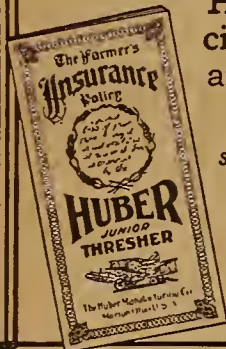
THE HUBER JUNIOR THRESHER

is just as efficient as the large Huber Thresher, a machine whose many good qualities are known to experienced threshermen everywhere. It threshes cleanly and "saves the grain". It differs only in size from the best standard threshing machines.

Any 12-25 tractor runs the Huber Junior Thresher. Huber Light Four Tractors are especially adapted to running it economically and efficiently.

Write for the "Farmer's Insurance Policy" which describes the Huber Junior Thresher in detail.

The Huber Manufacturing Company
819 Center St. MARION, OHIO
Manufacturers of the Huber Light Four Tractor
Canadian Branch: Brandon, Man.



"Oh, John, Get Me the Screw Driver —I Want to Put Up a Curtain Rod"

Most housewives pride themselves on their ability to "fix" things about the house. Are YOU dependent on someone else to get for you the necessary tools when you need them? Or do you have to hunt for a file to smooth down a rough edge or a pocket knife to sharpen a pencil? This "So Handy" Tool Kit will save you a lot of needless bother. You can have a tool kit of your own, to use just when you need it. The uses to which the "So Handy" Kit can be put are almost unlimited, but below are the 10 most common purposes it serves:

- | | |
|------------------|-----------|
| 1. Pocket Knife | 6. File |
| 2. Screw Driver | 7. Auger |
| 3. Nail Puller | 8. Chisel |
| 4. 3-in. Rule | 9. Awl |
| 5. Bottle Opener | 10. Punch |



Premium No. 1020

The "So Handy" Tool Kit consists of a strong, durable knife handle which contains a knife blade at one end and an ingenious arrangement at the other for holding securely the 6 extra blades comprising the tools listed above. Some blades, which are of heavy, tempered steel, are designed to serve two purposes each. The Kit comes in a neat leather case, 3 by 4 inches, and can be conveniently carried in the pocket.

This "So Handy" Pocket Knife Tool Kit GIVEN

in exchange for a few minutes' time in introducing FARM AND FIRESIDE among your friends and neighbors. Get ten of them to pay you 25 cents each for a one-year subscription, send us their names and addresses with the money collected, and the Tool Kit will be sent you postpaid. We have only a limited number of sets left, so don't put it off. Address

FARM AND FIRESIDE

Club-Raiser Dept.

Springfield, Ohio

Things You Can Do to Keep Your Horses Fit

[CONTINUED FROM PAGE 13]

in the proper way. It is also a good plan to go out just before you go to bed and give him another feed of hay.

The hay ration at the noon feeding should be rather light. It only tends to fill the animal up, and will make him sluggish and logy for a good part of the afternoon. You know yourself how hard it is to work on a full stomach, and the horse feels the same way about it.

I have said very little about the amounts or kinds of grain to feed. You know, I think, that the size of the rations depends on the size of the horse and the amount of work he is doing. You also know, although sometimes I think some farmers forget, that you should reduce the ration at the same time the work is reduced. Neglect of this point may cost you a horse at a time when you can least spare him.

Bran fed from time to time is a wonderful conditioner, and will do more to keep an animal fit than all the so-called "condition powders" you can buy.

There is an old saying, peculiar to medical men, that to me contains the very essence of the profession. I have used and applied it time after time in my many years of practice, and it seldom fails if followed out. Here it is:

"Medicine is a science; its application is an art."

These nine words will stand lots of thinking over. Medicine itself does not concern you. Where or how it is made, or what goes into it, is not essential from your viewpoint. Neither does it make any difference to you to know if it is the right thing to use. You pay your veterinary to know that, and I trust you always employ a competent one and one who knows his business. There are quite a few who don't.

When it comes to applying the medicine your doctor has given you, right then the case oftentimes passes out of his hands into yours entirely. A veterinary is placed in a peculiar position. He is seldom called until the case has become more or less advanced, and the animal, by the time he reaches the farm, is very often in a really serious condition. He diagnoses the case, administers whatever remedies he considers necessary at the time, gives you some medicine and salve along with very explicit directions as to their use, and leaves. The chances are that he may never see the animal again. Because it is impossible for him to run out ten or twelve miles into the country two or three times a day, whatever the case may be, he is compelled to leave the application and administering of that medicine entirely in your hands. When he prescribed that particular medicine, it was, to the best of his knowledge and belief, the best remedy for the case.

Do as the Doctor Says

Well, in the course of two or three days, we'll say, the animal dies. What is your first inclination? To put the blame on the doctor, of course. You rush to the telephone, and the conversation runs something like this:

"Hello! Doc So-and-so?"

"Yes."

"This is Jim Jackson, up on the old Reynolds farm. You know that gray mare you came out here to see the other day? Well, she died."

"You don't say? Why, I thought when I left your place she had a good chance to pull through. Did you give her that medicine I left for her?"

"Yea—that is, I did for about a day, and she didn't seem to be getting any better, so I just stopped giving it to her. She had a couple of good doses, though. Seems like if the medicine had been any good it would have showed some effects."

I doubt if the doctor is able to hear your last few words. The chances are that he has dropped the receiver and fainted dead away. His directions called for a dose of that medicine to be given once every three hours until the animal showed some improvement. You gave a couple of doses, saw no improvement, and let it go at that, so the animal died. How true is the saying that the application of medicine is an art!

We have only been supposing the above case, but it has happened to me many times. Here is a specific case, however: I was called upon at one time to attend a horse which had a severe attack of navicular disease. The treatment in a case like this is an application of a mixture of

New Pointers on Breeding Live-Stock

Many valuable pointers, most of them entirely new to live-stock breeders, are contained in an important booklet, "How to Breed Live-Stock," now being distributed free by the National School of Animal Breeding. Among other valuable chapters in the book are five of special value headed: Why So Many Animals Fail to Breed, The First Requisite of Scientific Breeding, Why So Many New Born Animals Die, How to Develop Greater Herds and Individuals, How to Prevent Abortion. The book also contains pictures of the breeding organs of both male and female animals. No breeder of live-stock should miss this free hook—the coupon below will bring it to you.

Bringing the School to the Breeder

The National School of Animal Breeding, through its famous home-study course, has already shown hundreds of breeders how to raise more and better live-stock and how to get bigger profits. Breeders all over the country have been thoroughly taught how to breed successfully by capsule, how to judge instantly fertility, vigor, longevity, good mothers and pleasant dispositions; how to prevent and cure diseases which weaken and kill their cattle; how to tell the real reasons why their mares, cows, sows and ewes sometimes fail to breed; and they have received practical help and guidance in all their other live-stock problems.

The home-study course is written in everyday language, easy to understand and the direct result of many years of experience. No guess work, no wild ideas, no theory, no "high-brow" stuff—just real plans, methods, and pointers, that will help you increase the value and number of your animals and show you how to take more profits out of your live-stock than you ever did before. The free booklet, "How to Breed Live-Stock," also contains full information about this course.

Mail Coupon

Mail the coupon below now for this free book. It is chock-full of facts and pointers of direct money value to you. You incur no obligation whatever in reading this book and it is well worth a good portion of any man's time. Mail the coupon now.

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Dept. 695 Pleasant Hill, Ohio

National School of Animal Breeding
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Please send me, without obligation, your free booklet, "How to Breed Live-Stock."

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to hold his shoes fast. Remember the nail "Capewell." Not the cheapest nail regardless of quality but the best in the world at a fair price.

Neither restless stamping, so common in fly time, nor excessive strains of hard work are too much for Capewell endurance.

It pays the horse owner to insist upon getting The Capewell nail used.



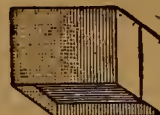
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MOST any kind of cream separator will do fairly good work the first few months, when it is new.

But if it is a cheaply made or inferior machine, after the first few months your trouble will begin.

And the worst of your experience with such a machine will not be the fact that it wears out quickly or that it runs hard, or that you are piling up repair expense, but that you are losing a lot of butter-fat that is worth 50 to 60 cents a pound.

And that is what you really buy a separator for—to save this valuable butter-fat.

Any time you buy a cream separator—no matter who makes it or what claims are made for it—that has not behind it a long record of satisfactory service, a record known to all, a record that is in itself a guarantee of satisfactory service, you are taking a gamble with all the odds against you.

Why take chances at all when you come to select a machine that may mean so much in increasing the profit from your cows?

There is one cream separator that has been the acknowledged world's standard for over 40 years. It's the one cream separator that is used by the creamerymen almost exclusively. Dairy farmers the country over know the De Laval and its sterling quality. Experience has shown them that

It is the best cream separator that money can buy

Order your De Laval now and let it begin saving cream right away. See the local De Laval agent, or, if you don't know him, write to nearest office.

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ABSORBINE

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SAFE ANTISEPTIC AND GERMICIDE

Does not blister or remove the hair and horse can be worked. Pleasant to use. \$2.50 a bottle, delivered. Describe your case for special instructions and Book 5 R free.

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Only \$2 DOWN ONE YEAR TO PAY

NEW BUTTERFLY

38 Buys the New Butterfly Jr. No. 2½. Light running, easy cleaning, close skimming, durable. **EASY TO CLEAN**

30 Days' FREE TRIAL

Separators are guaranteed a life-time against defects in material and workmanship. Made also in four larger sizes all sold on 30 Days' FREE TRIAL and on a plan whereby they earn their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money. (9)

Albaugh-Dover Co. 2139 Marshall Bl. Chicago

several ingredients put up in salve form, and rubbed into the skin at some spot on the horse's body at which it will be easily absorbed, preferably the hollow part of the horse's heel, where the skin is thin and tender.

I gave the owner enough of this ointment to last him five days, and told him to rub it well into the skin once a day on a spot not larger than the diameter of a silver dollar, and at the end of that time to call me up and I would come out and see the animal again. He did as I instructed, and when I called the horse was well on the road to recovery.

Not long after a case of similar nature occurred, and I recommended the same treatment, and gave exactly the same instructions. The owner called me at the end of the third day, asking me to come out, and telling me that he didn't think the treatment was having the right effect. When I got there I found he had made the required number of applications all right, but instead of a small spot he had covered the horse's entire ankle, and it was highly inflamed and swollen. By dint of careful manipulation we managed to save the horse, but it goes to show what carelessness will do.

When questioned about it, he said that I had told him something about a spot the size of a dollar, and supposed if he made the spot larger the cure would be effected just that much quicker.

You can draw your own conclusions from this incident, but it shows that the process of following implicitly the directions your veterinary gives you is just as important, if not in some cases more so, as the medicine itself.

Farmers, from long association and care of horses, become more or less experienced in regard to remedies and treatments for their different ailments. But it is not a good plan to rely too much on your own judgment. When in doubt, call a doctor; and call him even if you are not in doubt, as many a valuable animal's life has been saved by observing this rule. After he comes and tells you what to do, do that thing to the best of your ability. A dead horse never does any work.

To Keep the Eggs Coming

By J. T. Collins (Colorado)

I WANT to make FARM AND FIRESIDE poultrymen acquainted with a plan worked out and in use by one New England egg producer by which he secured a nice increase in egg yield during the warmest portion of the year. He is sure that his secret of success is in keeping the appetite of his flock keen and constant throughout the summer season. By this plan his hens are kept consuming a full ration, and productive laying is kept up long after they would otherwise have ceased to produce.

"Variety of feed" is his watchword. In spring and early summer his hens have free range, with constant access to a well-balanced dry mash. Then as production begins to slacken they are confined for a month or two, and furnished a stimulating moist mash in the morning and one at night in addition to the dry mash and scratch grain, also a variety of greens. During the spring no moist mash is supplied, and after being confined the hens are greedy for it. About August his hens are again given range and a moist mash, wet with sour milk. He then gets another late speeding-up of egg production, and by this plan secures two or three dozen more eggs per hen.

This same poultryman, in order to cut the cost of animal food for layers and growing chicks, now buys soup bones. These bones are stewed for the family table, and after serving this purpose, together with the inferior meat, gristle, etc., they are given a second long-continued boiling, which extracts most of the food elements except the mineral portions, and also softens the bones.

Not less important, when his layers are confined, is an abundant daily supply of tender green succulent feed, such as lawn clippings, and kale and rape grown especially for the purpose. Dried-up wire-like grass and weeds do not fill the bill.

His mash mixture is two parts each, by weight, of bran, middlings, ground oats, cornmeal; one part each of gluten, alfalfa meal, and fish scrap; three-fourths part beef scrap; one-half part each of oil meal and pulverized charcoal; and one pound of salt to every hundred pounds of mash. When fed moist, the hens are given only what they will clean up in about twenty minutes.

Binder Performance that Reduces Harvesting Costs



THE John Deere is binder economy. It has the kind of construction that results in continuous good service over a greater term of years. And because of its better construction throughout, the cost for repairs is exceedingly low. Its ability to get the right kind of results in heavy, tangled grain and in short, irregular grain, or when weather and field conditions are bad, makes the John Deere a most profitable binder investment.

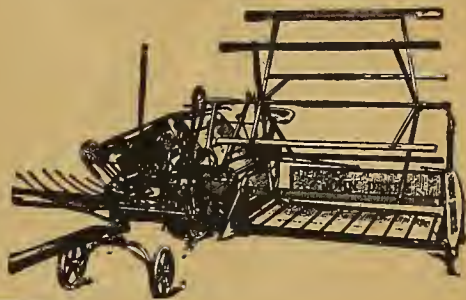
In this better binder you get a bigger, stronger drive wheel, with wide tire and heavy lugs—it gives plenty of traction; a rigid hot-riveted main frame that stands up under severe strains; a stronger binder platform—the knife and canvas always run freely without binding; three packers instead of two—better-shaped and easier-handled bundles are made; quick turn tongue truck that overcomes side draft and makes square turning possible; an improved bundle carrier that does not scatter the bundles and is easy to operate.

Only in part does this cover the points about this binder that make it a dependable, economical binder to operate. See it at your John Deere dealer's and write today for catalog.

JOHN DEERE GRAIN BINDER

WRITE FOR THIS BIG BINDER BOOK—FREE. We have a big binder booklet printed in four colors which fully illustrates and describes the John Deere Binder in every detail. This will be sent to you free—simply state the implements in which you are interested and **ASK FOR PACKAGE G-411.**

John Deere, Moline, Ill.



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AND SERVICE



JOHN DEERE
DEALERS GIVE BOTH

For Sick Chickens

Preventative and Curative of colds, roup, canker, swelled head, sore bead, chicken pox, limber neck, sour crop, cholera, bowel trouble, etc. Mrs. T. A. Morley, of Galien, Mich., says: "Have used Germozone 17 years for chickens and could not get along without it." Geo. F. Vickerman, Rockdale, N. Y., says: "Have used Germozone 12 years; the best for bowel troubles I ever found." Frank Sluka, Chicago, Ill., writes: "I have lost but one pigeon and no chickens in the 3 years I have been using Germozone." C. O. Petrain, Moline, Ill.: "I never had a sick chick all last season." Bernard Horning, Kirksville, Mo., says: "Cured my puniest chicks this spring." Ralph Wurst, Erie, Pa., says: "Not a case of white diarrhea in 3 years. I raise over a thousand a year." Good also for rabbits, birds, pet stock.

Germozone is sold generally at drug and seed stores. Don't risk a substitute. We mail from Omaha, postpaid, in new 25c, 75c and \$1.50 sizes.

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POULTRY AND PIGEONS FOR PROFIT

Foy's big book tells all about it. Contains many colored plates—an encyclopedia of poultry information, poultry houses, feeding for eggs, etc. Written by a man who knows. Sent for 5 cents. Low prices, fowls and eggs. **FRANK FOY, Box 4, CLINTON, IOWA**

Baby Chicks 10,000 each week after March 15th. 20 varieties, utility and exhibition stock. \$14.00 per 100 up. Circular and price list free. Stamps appreciated. **Spencer Hatchery, Spencer, O.**

Fine Breeds Poultry, Turkeys, Geese, Ducks, Guinea; Bantams, Hares, Pigeons, Dogs, Stock, Hatching Eggs specialty, reasonable. **Pioneer Farm, Telford, Pa.**

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MEN! We ship you these shoes before you pay a single penny, because we feel so confident that the high quality standard will amaze you. **Sent on approval.** We are in the **Shoe Center of the World**; that is why the price is only \$3.85.

HUB "SEAMLESS TOE" WORK SHOE

Munsen Last; the style our soldiers wore on long, distant, tiresome marches. Designed, especially, to meet the requirements of farmers who do all kinds of outdoor work and want a serviceable and very comfortable shoe. Have strong, heavy "Royal Oak" soles. The soft selected "Kangaroo" uppers resist dampness and do not harden after wetting. Bellows tongue that is acid, dirt and manure proof. The seamless toe prevents corns, bunions, etc., and does not wear and tear your socks. Try them on and feel how comfortable they are, then decide whether you want them. If they are not the most wonderful value you ever saw, send them back and we will refund your money. **SEND NO MONEY!** don't pay until shoes arrive. Just send your order and these solid comfort work shoes will come to your door postpaid. Order them at our risk and your convenience. Write and get your pair while this special offer holds good. **WE PAY POSTAGE.**

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Prevent Dead Chicks in the Shell

You can prevent it. Right methods as outlined in a new 16-page bulletin, issued by Professor T. E. Quisenberry, Box 2610, Leavenworth, Kansas, tells you how to avoid this great loss. Also how to successfully raise baby chicks and what to feed them. This bulletin will be sent to our readers who ask for it. Suggest you write today before supply of bulletins are all gone.—Adv.

Baby Chicks 25 Leading Varieties—Safe delivery guaranteed. Postpaid. One of the largest and best equipped hatcheries in U. S. Catalog FREE. **Miller Poultry Farm, Box 555, Lancaster, Mo.**

Chicks DAY OLD. Standard breeds, free range. Order now. Prepaid P. Post. Free book and prices. **PRIZE BABY CHICK CO., Springfield, Ohio**

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Steel FENCE POSTS

HERE is the improved Steel Fence Post you have been waiting for. Bigger, better, stronger. Thicker material. Drives easily in any soil. Anchors solidly. A labor saver. Heavily galvanized inside and out after forming. A post that will settle your fence-post problem for good. See it at your dealer's and you will be enthusiastic.

Send for special book. Dealers everywhere.

American Steel & Wire Company
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33% Heavier—100% Stronger

By a woman for women

WHEN Mrs. Jones, next door, writes to the WOMAN'S HOME COMPANION, she is helping edit it.

Her letter is only one of many thousands—but it is just as important to the Editor as any of them.

They talk in these letters about clothes, and babies, and cooking—and such things as only women talk about to each other—

And the Editor, being a woman, understands as only a woman can understand—

And that is why the COMPANION is just what these women want it to be.

Everything in the COMPANION, every story, every picture, every article and department, every suggestion about clothes, or cooking, or children, every idea for parties, club work, household economy—all is inspired by the wants and needs, spoken and unspoken, of the million women who depend upon the COMPANION.

It is edited for them and by them. Their interpreter is a woman like themselves. She understands. She has the feminine intuition. She has the woman's point of view.

In the June Number—

Do you ever write to movie stars?

You will be surprised when Rob Wagner, secretary to one of the biggest ones, tells you how many letters these stars get—and what's in them.

A fascinating spendthrift

Gay, lighthearted Kitty Davenant is the interesting heroine of "Cake on the Waters," an engaging new two-part novel by Zoe Akins.

A woman who married a failure

looks back over her married life and tells her own true story freely, intimately and interestingly.

Especially for June brides

the new American March by Reginald DeKoven—"The Wedding Dress," a lovely picture in full color—wedding fashions—wedding menus and decorations—and details of "a house that runs itself."

The grouch at tea parties

may have most of her frowns painlessly removed by reading Grace Margaret Gould's monthly talk on "Good Looks."

There's a wealth of stories, pictures, special articles and useful information in the June

Woman's Home Companion

Published by The Crowell Publishing Company, also publishers of The American Magazine and Farm and Fireside

From Traveling Salesman to Market Gardener

By E. L. Kirkpatrick

THAT first-class garden products can be grown on ordinary soil, and that a standing market for these products can be created where it has not existed formerly, has been proved by C. W. Schwartz, owner and manager of the Springvale Gardens at Ottumwa, Iowa. He is also demonstrating that good net profits may be made in the gardening industry.

Mr. Schwartz was a traveling salesman before going into the gardening business in 1908. Crippled in a railroad wreck, he began to look about for some profitable occupation which required no traveling. From this standpoint, as well as from that of being out of doors, market gardening appealed to him. He secured ten acres of land, near Ottumwa, fairly well adapted to garden crops and favorably located with regard to marketing.

Mr. Schwartz says that four things are necessary to success in gardening: Irrigation, fertilization, quality of product, and printer's ink. Early in the game he learned that good, crisp vegetables could not be produced without sufficient rainfall during the growing season. Irrigation was resorted to, and the gardener, after searching for available water, found to his surprise an unlimited supply 30 feet below

are available also at the particular time needed by the crop. Further experimental work with the 7-17-10 fertilizer showed it to be equally as well adapted for the growth of other vegetable crops. Various tests showed, also, that onions, cauliflower, and tomatoes use 1,000 pounds per acre of the mixture profitably. The application is supplemented every three years with enough well-rotted manure to maintain humus in the soil.

Shortage of potash is causing Mr. Schwartz no worry this coming season, he intends to make use of tobacco stems refuse from the cigar factories. The stems are ground to a fine powder before being mixed in the fertilizer.

Through irrigation and special attention to the plant-food requirements of the various crops, Mr. Schwartz has secured the products which go to make up the "Springvale honest pack." Extreme care in the harvesting, washing, grading, and packing the produce gives it that splendid appearance needed to attract the customer's attention. Since the Springvale tag insures quality, a customer once gained is seldom lost. Crops marketed are head lettuce, cauliflower, celery, Spanish onions, tomatoes, blackberries, potatoes, and fall



From a 30-foot well this irrigating outfit supplies water sufficient to cover 10 acres of garden truck. Mr. Schwartz's ledger indicates that the venture has been profitable

the surface at the central part of his gardens. A four-horsepower gas engine, connected by means of a double-bar pumping jack with five heavily sand-screened pipes, furnishes a means of lifting the water and forcing it through a four-inch galvanized pipe to various parts of the garden. Branch pipes connect the main with distributing pipes, 1 1/4 inches in diameter and spaced parallel, 25 feet from each other. Risers connected with the distributing pipes, each fitted with a revolving nozzle at the top, spray the water evenly over the surface. All nozzles and pipes are removed and stored each fall in order that the gardens may be conveniently tilled the following spring.

Although the irrigation system worked successfully from the start, it did not overcome all the obstacles. Mr. Schwartz soon learned that water alone would not produce high-quality crops. Large Spanish onions, produced at the rate 900-1,000 bushels per acre, would not keep until they were disposed of on the market. "My large onions sold to the middleman usually spoiled for him or for his customers," said this gardener. "Other crops, though crisp and tender, were full of water and failed to stand the test of marketing."

Working on the idea that crops should maintain their quality until they reached the ultimate consumer, Mr. Schwartz began a thorough study of their fertilizer requirements. Through several years of experimental work on onions he learned that the mixture best adapted for producing a large-to-medium, smooth, firm, mild-flavored bulb to be a 7-17-10. The 7 per cent nitrogen secured from tankage and meat scrap is held in the soil for use of the crop throughout the growing season. The 17 per cent of phosphorus, from raw rock phosphate, and the 10 per cent potash

radishes. Owing to excellent quality of the products offered for sale, prices received range from one-third to one-half higher than those of the average Ottumwa gardener.

Springvale Gardens advertise to reach the ultimate consumer. "The consumer is the one who must know of my goods," states Mr. Schwartz. "It's an easy matter for the retail man to sell produce, provided the public wants it." For the benefit of the public printer's ink is used unsparingly. Through the local daily papers, in Mr. Schwartz's own concrete poetical or fanciful turn, the consumer is reminded of the various crops in season, as well as the name of the grocer where these crops in the "Springvale honest pack" may be secured. The needs of the market are kept constantly in mind, and nothing which might aid in producing better vegetables for the consumer passes by Mr. Schwartz unnoticed or untried.

How to Make Two Rosebushes from One

FROM a rosebush take a stalk, four to six inches long, with several joints that include both new and old wood. Cut this slip with a knife and make a clean, slanting cut across the stalk. Nippers of any kind should not be used, as they will bruise the stalk too much. Immediately after the stalk is cut off, stick it gently into a box of moist sand, so that one or two joints will be covered. Keep the sand moist, and place the box in a situation that has sun and shade in equal portions. When the slip shows a number of new leaves in a flourishing condition it has enough root to warrant its removal to permanent soil.

272 31

FARM AND FIRESIDE

The National Farm Magazine

JUNE 1919

5¢ A COPY



More Than 650,000 Circulation



Modern farm group with inside entrances to the buildings. Illustration shows them roofed with red Everlastic Multi-Shingles (4-in-1).

Barrett Everlastic Roofings

Handsome roofs at low cost

A handsome house and thrifty looking out-buildings are as much an asset to the farmer as a good suit of clothes is to the business man.

Barrett Everlastic Roofings enable you to have, at low cost, handsome and serviceable roofs on all the steep-roofed buildings around the farm—the house, garage, stables, sheds, pens, silos, etc.

Everlastic Roofings are made in shingle form (both separate and in strips of four) and in rolls. They are made of high-grade materials and backed by the great Barrett Company with 60 years' experience in the roofing business.

Except the popular "Rubber" roofing, they are all faced with a coating of crushed slate in natural color, red or green, making them not only serviceable and fire-resisting, but artistic enough for the finest home.

The Everlastic line includes—

Everlastic "Rubber" Roofing

A recognized standard among "rubber" roofings. Famous for its durability. Made of the best water-proofing materials, it insures dry, comfortable buildings under all weather conditions. Nails and cement with each roll.

Everlastic Slate-Surfaced Roofing

A high-grade roll roofing, surfaced with genuine crushed slate in red or green. Never needs painting. Colors are permanent. Handsome enough for a home, economical enough for a barn or garage. Combines real protection against fire with beauty. Nails and cement with each roll.

Everlastic Multi-Shingles—(4 Shingles in One)

Made of high-grade felt thoroughly water-proofed and surfaced with crushed slate in natural colors, either red or green. Laid in strips of four shingles in one at far less cost in labor and time than for wooden shingles. Gives you a roof of artistic beauty worthy of the finest buildings, and one that resists fire and weather.

Everlastic Tylike Shingles

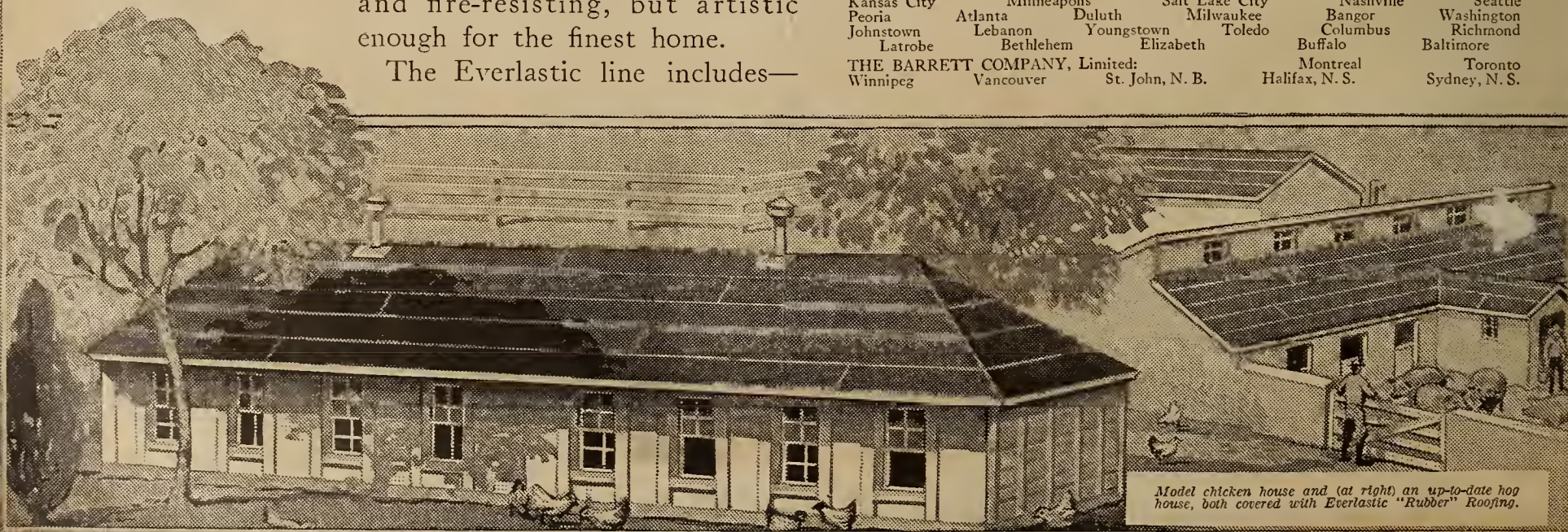
Made of the same durable slate-surfaced (red or green) material as Everlastic Multi-Shingles but cut into individual shingles, 8 x 12¾ inches. Laid like wooden shingles but cost less per year of service.

Write for booklets today

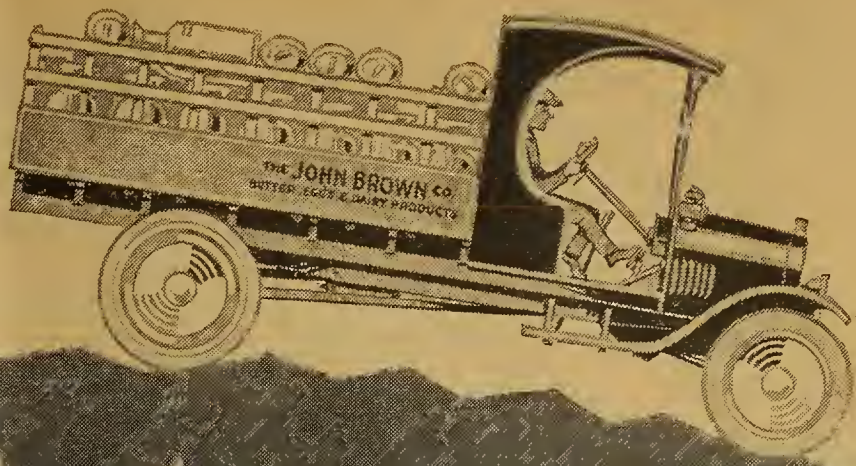
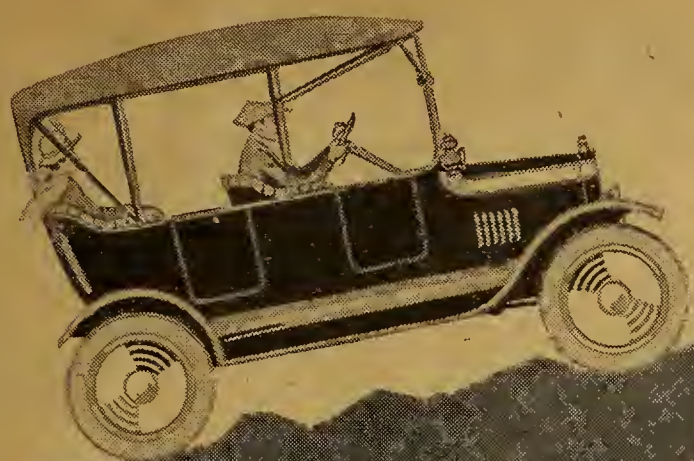
The Barrett Company

New York	Chicago	Philadelphia	Boston	St. Louis	Cleveland
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Johnstown	Lebanon	Youngstown	Toledo	Columbus	Baltimore
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Winnipeg	Vancouver	St. John, N. B.	Halifax, N. S.	Sydney, N. S.	

THE BARRETT COMPANY, Limited:



Model chicken house and (at right) an up-to-date hog house, both covered with Everlastic "Rubber" Roofing.



Like the teeth of a buzz saw!

YOU'VE stood in awe before a buzz saw and watched it literally tear its way through a piece of material. Being driven at such a terrific speed, it produces results that are almost startling. But if you were to run the buzz saw at a much slower speed, and take some of the keenness off of the teeth, then you would have an action very similar to that of road bumps, ruts and rough places as they rack, strain and wear out your Ford Car or Ford One Ton Truck.

The thousands of sudden, heavy impacts, while not sufficient to cause instant breakage, yet cause great and unnecessary wear on all parts, particularly the power unit and the tires.

It has been proved by nearly a million Ford owners that by properly cushioning their machines against road shocks and vibrations with Hassler Shock Absorbers, that you save at least 30% of the ordinary tire and repair

expense, and that your Ford's depreciation is decreased a like amount. You also obtain considerable increase in gasoline mileage, due to the smoother running. Hasslers prevent squeaks, rattles and deterioration, for the spiral, conical springs of chrome-vanadium steel compress on either upward or downward movements.

In addition to all of these savings you have such greatly increased comfort that your Ford Car or Truck rides and drives as well as the highest priced heavy models. It steers easily, holds the road, travels safely at high speed, and the general and good satisfaction you derive from its use is increased astonishingly by Hassler Shock Absorbers.

Hassler Shock Absorbers can be put on in a very few minutes, either by you or your garageman. There are two types, one for all Ford Passenger Cars, the other "Double or Twins" for the rear of the Ford One Ton Truck.

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Don't ride without Hasslers because some one tries to discourage you. They are a quality product—worth their price. The Hassler dealer in your vicinity will put them on for 10 days' trial. Your money refunded if you say so. Write for name of dealer and Trial Blank.

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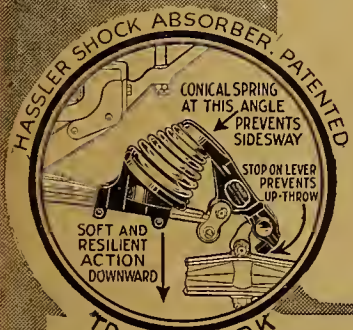
1353 Naomi St., Indianapolis, Indiana

Canadian Factory, Hamilton, Ontario

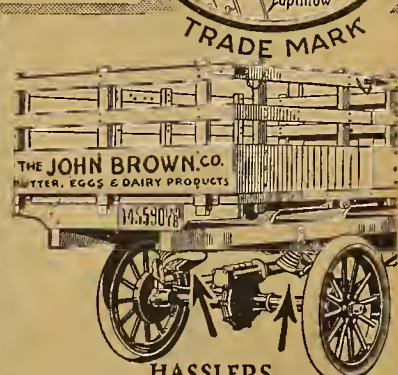
The Hassler Guarantee: "Absolute satisfaction or your money back"



The conical springs set at the angle shown prevent sideways and allow for the most resilient downward action. The springs compress on either upward or downward movements—do not stretch out of shape—do not allow up-throw. Hasslers last as long as the Ford and make it last.



HASSLERS
For all
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HASSLERS
"DOUBLE or TWINS"
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Willard STORAGE BATTERY

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Satisfaction

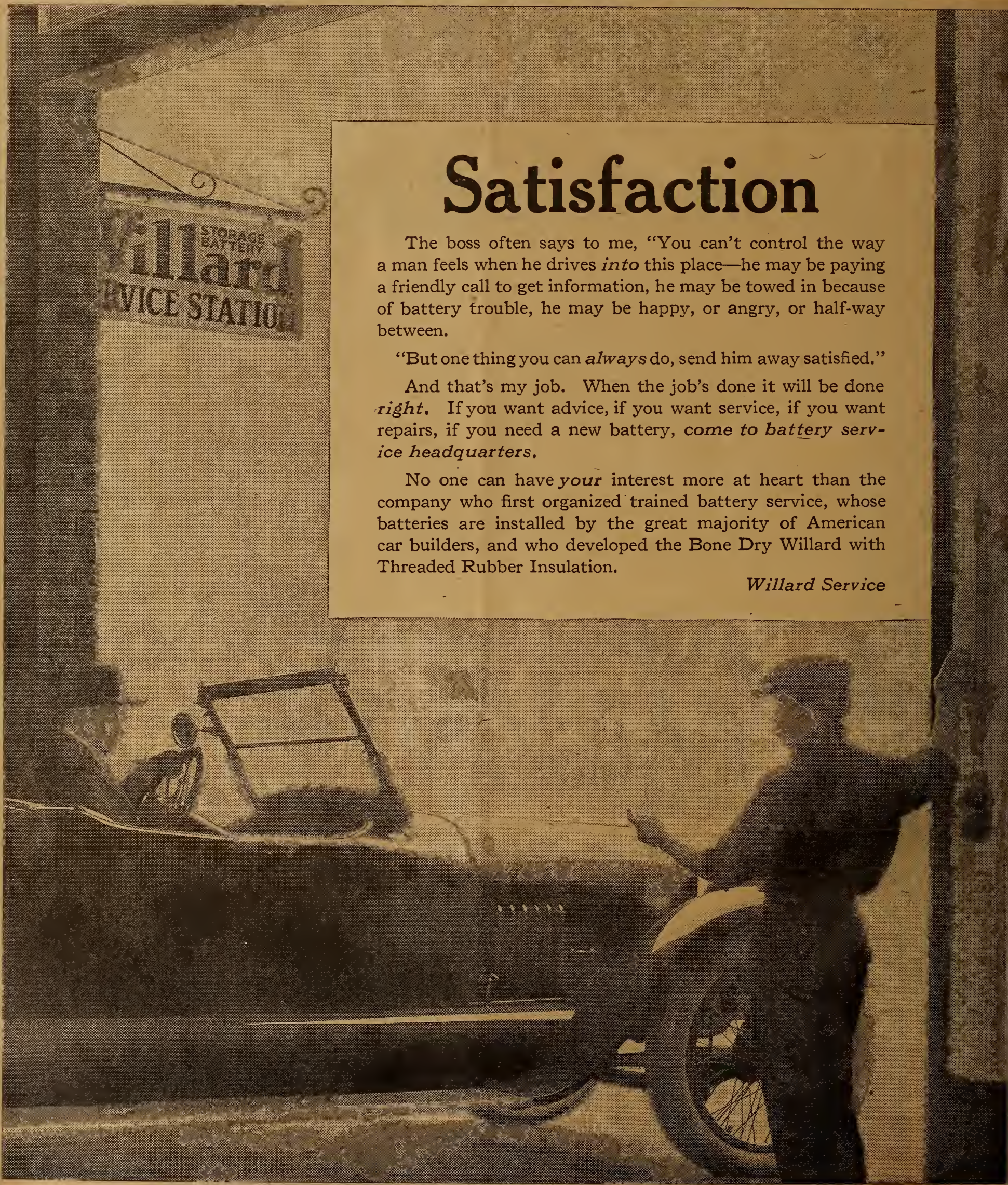
The boss often says to me, "You can't control the way a man feels when he drives *into* this place—he may be paying a friendly call to get information, he may be towed in because of battery trouble, he may be happy, or angry, or half-way between.

"But one thing you can *always* do, send him away satisfied."

And that's my job. When the job's done it will be done *right*. If you want advice, if you want service, if you want repairs, if you need a new battery, *come to battery service headquarters*.

No one can have *your* interest more at heart than the company who first organized trained battery service, whose batteries are installed by the great majority of American car builders, and who developed the Bone Dry Willard with Threaded Rubber Insulation.

Willard Service



What You and I Can Do Now to Put Farming on a Better Basis

By MacHenry Johnson

NOTE: Latest available official figures show that the average farm income is only about 3½ per cent on the investment. On this basis the average farmer could sell his farm, invest his proceeds in Liberty bonds, and, without doing a lick of work, make more money than he is averaging at present. But you don't want to do that. What you and I want to do is to put farming on a business basis that will make it pay us a living and a rate of interest on our investment equal to that in other successful businesses. This article gives us some valuable hints as to how we can go about doing that. THE EDITOR.

YOU and I both know that on the farm a generation ago the matter of what it cost us to produce food was not a question of very much interest to us or to anyone else. Even five years ago it was not receiving much of our attention. But to-day the cost of production on your farm and on every other farm is a matter of vital interest to both farmer and consumer.

The reason is that farming is becoming a highly organized and particular business. On the crops you grow, on the way you market them, on the way they are handled between the time they leave you and the time they reach the consumer, depends the vital question of feeding the world with food on which you have made a reasonable profit and on which the consumer doesn't have to spend more money than he can afford.

This efficient organization of agriculture along business lines is coming just as surely as the sun rises and sets, and it is up to you and me to prepare for it, beginning now. Production, marketing, manufacturing, and distributing the things you and I produce are all questions of vital interest to us, and the immediate personal thing you can do to bring about a thorough understanding and a logical working out of these problems is to align yourself with the best and most forward-looking agricultural organization in your township, county, and State. Get together with your fellow farmers and work out your local problems, and you will thus hasten the day when the local problems you have solved can be co-ordinated by our national farm organizations into a true solution of our national farm problems. And unquestionably that will mean more money in your pocket and success and dignity for farming throughout the nation.

Now you ask what has brought about this change of attitude and put farming in the way of getting on its feet. Let us go back a little.

One factor has been the settling up of the new lands of the West. When there were no more rich homesteads to be taken up, and the increase in crop area was not keeping pace with the increase in population, prices on the farm of necessity began to rise. It also became harder for the young men to get farms of their own and, with the development of manufacturing in their cities, easier for them to get positions in town. Population therefore shifted toward the cities at a more rapid rate than ever before.

From this state of affairs new social conditions have arisen. The new order of congested city life is more completely out

of touch and sympathy with country life than ever before, and this at a time most critical for consumer and producer alike. The city man doesn't know what you and I are up against on the farm. This lack of understanding between country and city leads to unnecessary discord over the matter of price of farm produce. Yet each side wants only justice and fair dealing.

article you produce drifting too low, you stop raising it and go to doing something else. If the drift is brought about gradually, allowing time for gradual change to other types of farming, no great harm is done you. Under the normal slow change you can feel your way along in making these changes, without any help from cost studies. In fact, the most successful

operating all up and down the line. Everything you produced had new or changed cost factors entering into it. The old order of things was swept away. It was no longer possible to feel one's way along, with every cost factor upset.

You to-day want analytical data on cost of production. You want it to help you produce efficiently. You want it to help you decide what enterprises to enlarge and what to curtail. Probably radically changed methods are desirable under the new order of things. There is the problem of labor-saving equipment to the fore again. Maybe hand labor was cheaper than the milking machine under the old order of things. How about it now? Have power plows advanced in price more than cost of keeping horses? Can the old fertilizer application be continued, or should it be increased?

The side of cost studies having to do with the solution of these and hundreds of other kindred problems of efficiency of your farm organization is a little different from the side having to do with fair price. In considering fair price we want to know the total cost, and are not so much concerned about anything else. In considering economy of production, a study of the factors making up the total is the thing most valuable. The complete cost study kills the two birds with one stone.

What Is a Fair Price?

It is to the interest of both producer and consumer that food products bring a fair price. Fair price is cost of production plus a reasonable profit. If the consumer is so organized for the time being as to be able to get a commodity you've raised for less than it costs you to raise it, then it is just a question of time until, losing money, your production will so decrease that it will bring much more from the consumer than it costs you to raise it. On the other hand, it is well known that when you get an exorbitant price one year the thing is usually overdone the next year, resulting in a loss to you. The history of the potato crop is a notable example of this.

The proper way to determine what a fair price is is to get the figures on production cost. It is the only basis upon which the matter may be settled without disastrous ups and downs for both producer and consumer.

The best illustration I have seen of the value of cost to date is a controversy between consumer and producer—through the organized middleman of course—as in the history of the recent milk strike in New York City. When the price of feed got so high that the feed bills were bigger than the milk check the farmers struck and asked for an increase. The dealers refused it at first, but finally, for the time being, granted their demands. Later they again reduced the price, and again the farmers struck. About that time Professor Warren of Cornell published his formula for cost of producing milk. It was the first time the farmers had ever had tangible data to back up demands. Warren's formula showed that they were justified in what they asked, and they won the case. The Warren formula may be sound or unsound. I understand it has been abandoned for a better basis which will bring milk down four cents a quart to the consumer and still give the dairyman a fair profit. But it was a start in the right direction, as subsequent events have proved.

City people are lamentably ignorant about country [CONTINUED ON PAGE 27]



Why Hit-or-Miss Farming is Dead and Gone Forever

FARMING is the greatest manufacturing industry in the world. Up to within the last few years it has been a disorganized, loose-knit, hit-or-miss proposition. Its day as such is gone, never to come again.

The time when a farmer could do a grilling day's work in the field and manage his farm properly in spare moments is also gone. He now faces a choice of two things: either he must continue to be a day laborer on his farm, at day-laborer's wages or less, or he must cut down his own physical labor appreciably and devote more of his time to thinking, planning, and directing.

Maybe you laugh at this idea, and brand us an impractical dreamer, sitting comfortably far away from the farm. It is not so. The handwriting is on the wall for all to see, and we are merely copying it.

And pray, do not think we are urging you to become a "gentleman farmer." Far from it. The only thought we are trying to get across is that the successful American farmer of the future must think more deeply, plan more carefully, watch his costs and markets and general conditions more closely, and take a more active interest in the broad, practical, co-operative agricultural movement that is going to put American farming on its feet, and which is even now beginning to show its head in the form of the federated county and state Farm Bureaus.

THE EDITOR.

Full and comprehensive data on cost of producing on farms is the one thing most needed by both sides.

When the law of supply and demand is allowed to operate unobstructed, prices naturally adjust themselves according to your production costs; or say that your production adjusts itself according to the price you can get for your product. In other words, if you find the price of an

farmers are those who most quickly sense this price drift as related to possible profits in other lines of farming, and consequently shift their business at the proper moment.

Under war conditions, however, price-fixing was resorted to by the Government. When the price was fixed on one article everything else was thrown out of kilter, for normal supply and demand stopped

How the Trees on Your Farm Help You Grow Better Crops

By Albert Sidney Gregg

JOHN DAVEY is a most interesting character. Elbert Hubbard some years ago wrote a little sketch of Davey in which Hubbard dubbed Davey the "big brother to the trees." The title is very fitting, for Davey is an enthusiast about tree life, and the relation of trees to human welfare and happiness.

When Davey landed in America from England, where he had been educated in all the lore of horticulture and related "arts," he was obliged to take the first job he could get—that of helping to lay out new streets in Warren, Ohio. With the aid of friends he eventually got a position in his line. Then he studied mathematics, English, Greek, Latin, and astronomy. At length he started a greenhouse. While waiting for his "crop" he worked in the ice field, developed a felon on each thumb, overslept while trying to catch up with his sleep in daytime, and let the fire go out and cause the death of his beloved plants. A farmer helped him to get started again, and this time a hailstorm destroyed his greenhouses.

Next he got a job as landscape gardener—in a cemetery, at Kent, Ohio. While working in Kent he wrote a book about trees and their care. No publisher would take the risk of bringing out his book, and so Davey published it himself.

His sons and others sold the book, and then came the big idea.

Men with large estates and others asked Davey if he could do for trees what he had been telling others to do in his book, and he replied that he could. He was forthwith engaged to "doctor" trees in many parts of the country. Then he began to teach others how to do the doctoring. Thus began a system of "tree doctoring" which has spread all over the nation and put Davey on Easy Street.

Davey has trained thousands of tree experts. He lives quietly at Birdmont, his home in Kent, where, surrounded by his birds and his gardens, he carries on his experiments. He is widely known as "Father John," and is justly proud of the fact that several hundred of his boys helped to whip the Kaiser, and that his son Martin was elected to Congress last November.

While Davey was operating a small force of men in Cleveland he became acquainted with Adam Smith, a business man of limited means who wanted to buy a small farm. Smith was tired of city life and wanted to "get back to the soil." He delegated Davey to be on the watch for a suitable piece of land, and then sat back to await results.

Two months afterward Davey came across a piece of 27 acres near the city, and took Smith out to look it over. There was just one tree on the land—a beautiful maple, with a perfect tent-like spread of branches 96 feet across. This tree took the eye of the city man, and he resolved to purchase the place, provided the owner did not want too much for it. He authorized Davey to buy the place, fixing \$15,000 as the price limit. A month later Davey set out to call on the owner, a young married man, whose father had worn out the soil, and who had died a short time before. As soon as Davey got in sight of the farm he was shocked to discover that the beautiful maple had been cut down. When he asked about the tree, the young farmer replied:

"You see, here is how it was: A fellow can't make a living here, and so I decided to sell out. I could winter here if I had firewood, but Dad had sold off all the small wood, and all I had left was the big maple. There was enough wood in it to last till spring, so I cut it down and worked it up into stove wood. Also, the room it took up will give me a few more rods of oats next spring, if I can't sell."

"What do you ask?" inquired Davey without comment.

"Five thousand," replied the farmer after a few moments' reflection. "But if you keep quiet about it I'll go fifty-fifty with you on all you can get over forty-five hundred."

Davey thanked him and went on his way. He did not have the heart to tell

the young farmer that he had lost \$10,500 by cutting down that big maple. Smith was ready to pay that for the little farm because of the tree, but with the tree gone he did not want it at any price.

"This may be an extreme instance, but it shows how many farmers utterly fail to sense the cash value of trees," exclaimed Davey in commenting on this story. "Too many of them think of trees merely as firewood, fence rails, or fence posts. In this instance the value was largely sentimental, but Smith was ready to pay good hard cash for his sentiment. Like most city dwellers, he was very fond of trees, and that was one reason why he wanted to get out into the country."

On another occasion, while Davey was lecturing in Charlotte, North Carolina, he was interrupted by a man in the audience who asked:

"How do you determine the value of a tree?"

"What will you take for the five mammoth oaks in front of the Greater Charlotte Clubhouse?" queried Davey in reply. "Would you take

due to moisture in the ground. Davey tells of a striking instance of destruction wrought by the cutting of trees in Pennsylvania.

Between Tyrone and Philipsburg he traveled over a road that led through a desolate region of thousands of acres, populated only by deserted villages and houses that were tumbling down. When he asked the conductor for information that official replied:

"Twenty-five years ago these hills were covered with glorious white pines. This road was built to get these giants to market. The soil is thin and, as you see, the sides of the mountains are steep. As the trees were killed off the land died. It is now about as productive as a desert."

In contrast with this story is another one told by Davey. One of his neighbors had a farm of 150 acres out of which he preserved 20 acres for woodland, for the future needs of the place. This man was not willing to sell his timber birthright for a mess of pottage, in the form of sales that would im-

wants to "cash in" as he goes along. Another foe to a proper regard for trees is the farm that is mortgaged. The man who owns the place subject to the mortgage is not in a rush to plant trees that may be enjoyed by another.

Davey insists that only properly matured trees should be "harvested," and that the harvesting should be regulated by government agents just as is now done on a government reservation. Growing trees should be protected in every possible way.

Destruction of trees in wholesale quantities all over the United States has set a sort of vicious circle in operation. With the cutting of trees and accompanying undergrowth the native birds have no place to stay, and they perish. This gives the insects destructive of tree life an opportunity to operate unhindered. Birds are guardians, for they eat the insects that destroy trees and crops. Every possible encouragement should be given to increasing the number of birds and in giving them all possible protection—all except English sparrows. These abominations do not eat insects, but steal the food that is often thrown out for native birds.

Every precaution should be taken to protect growing trees from being cut or bruised, for a break in the bark is a wound, and opens the way for agents of destruction that cause the wounded trees to decay.

Davey is authority for the statement that it is possible to remove over half of a tree without injury to the part that remains, if the wound is watched and kept painted. Coal tar or any thick paint will serve the purpose. This preparation is to exclude the moisture and preserve the wound until it is covered by a new growth.

The big point is to keep destructive agencies from getting a start, and that can be done by a prompt application of the paint or coal tar.

Here is a little hint on setting out an apple tree: Choose a tree with a straight trunk, and slip over it a four-inch socket tile. Stuff in some old rags so the tree will not become chafed by rubbing. This arrangement protects the young tree from rabbits and prevents it from being bruised. By the time the tree has grown big enough to fill the hole the tile can be broken with a hammer and the tree turned loose.

The man with the ax is not the only enemy of the trees. Boys with cat rifles or sling shots who go about killing birds are killing the natural protectors of the trees. Webworms kill trees, and the birds kill the webworms when they get a chance. And this suggests an enlargement of the vicious circle mentioned previously. It may be expressed in the form of a nursery jingle:

This is the boy that killed the bird that was about to kill the worm that killed the tree. Therefore the boy who killed the bird was the boy who killed the tree.

Davey tells about seeing a nest of these worms on a tree. A year later he passed that way again and saw that the tree was defoliated, and later discovered that the trees in the entire neighborhood were leafless. These worms are now all over that region, causing destruction among the trees. When Davey first saw that nest he had an impulse to get out of his buggy and set fire to it, but he neglected his duty, with the results set forth. If you have any similar nests, go and destroy them at once, or they may rob you by killing timber or orchard trees on your farm.

Every village, town, and city, as well as farmers, should give attention to setting out trees. For shade trees along streets Davey recommends the Norway maple, which must not be confused with the Sycamore maple. Then comes the American elm, the maple, the sycamore, the white oak, and the horse chestnut. Lindens, soft maples, and lime trees are not fit for street purposes, although they are just the thing for a lawn or park. Street trees should not be planted closer than 25 feet—30 to 60 is better. These intervals give the proper spacing for the full-grown tree, and where the street is wide and the soil is good greatly add to attractiveness of the place.

Davey gives interesting directions for the moving of a [CONTINUED ON PAGE 39]



This is John Davey

Trees Are Great Teachers—if We'll Just Go to School to Them

WHEN we see a man who has run his nerves ragged scheming and planning to get rich quick, or worrying because he doesn't get results in his work faster, we are reminded of the patience with which a tree goes about its business in life. It starts in a very small way, struggles up through the darkness of the soil that is both a help and a hindrance to its growth, and begins life as a tiny twig. It calmly and slowly adds a little to itself here and a little there, growing a little *all the time*. It never gets nervous or excited. It doesn't fret because it sees other trees ahead of it. If it is an oak it doesn't try to be a poplar. It just minds its own business and works hard, and in the end it stands forth, a success in life, equipped and ready to serve any end that man may have in view for it. Its mission in the world is Growth and Service. So should be a man's. And he should never forget that things worth while don't happen quickly. THE EDITOR.

ten thousand, fifteen thousand, twenty thousand dollars for them?"

"No," retorted several voices in the audience.

"There is your answer," said Davey.

The next day Davey met a man on the street who extended his hand as he exclaimed:

"Mr. Davey, I was present at your lecture last night, and heard the question about the value of a tree. I will add that if you would offer \$40,000 for those beautiful oaks we would not allow you to remove them."

The foregoing incidents merely illustrate the sentimental value of trees. It is quite a different matter to estimate the cash value of ordinary forest timber. They have one value for firewood, railway ties, and lumber, and quite another value as factors of nature in preserving moisture and humus in the soil. Cut the trees off the hills and the streams in the valley will dry up and the bottom lands lose their productiveness,

poverish his soil. Davey advised this farmer to plant an apple orchard. He did so, and trained it as directed. After this man's death the farm was sold to a city merchant for \$800 an acre, because the trees and the orchard were just what this buyer wanted.

This man did not turn his trees into money for himself, but his heirs got the benefit of his wise foresight. Likewise, those of succeeding generations suffer if one is shortsighted and destroys valuable trees for firewood or for some other purpose.

Davey's remedy for tree destruction is a systematic education of children in the value of trees, and to create laws putting trees under government control. Thus a man with an ax could not go out and engage in wanton timber destruction.

One of the chief foes of tree life is the tenant farmer, who often "robs" the land in all directions if he is not watched by the owner. Often he is a bird of passage, and

Why I Think We Are Going to Have Better Fertilizers Now

By F. F. Rockwell (New York)

I AM a farmer myself, and I know that there are a lot of moss-whiskered superstitions that have crawled down to farmers from the generations of the past. At any fair or an Institute meeting you and I can still find those who believe that planting should be done only in the dark of the moon; that cucumbers and melons will "mix" if they are planted in the same field; and that the bull and the boar must be allowed to run free with the herd if the cows are to throw strong calves or the sows give big litters.

But one of the most remarkable instances of a deep and abiding faith, with no foundation in fact, has been the belief many planters have had in the superior merit of some particular brand of fertilizer over all others. The old-line farmer who believed that life would not be worth living through the summer unless he took a couple of bottles of Doctor Dosem's Patent Indian Vegetable Tonic about the time the frogs began to peep in the spring would as soon have thought of giving up his favorite remedy for pure cold water as of changing to any other brand of fertilizer, regardless of what the analysis printed on the bags might show or his experiment station report.

These facts explain why we can't altogether blame the manufacturers of commercial fertilizer for not being quicker to take the step they give evidence of now taking. Very recently there has been, I find, a change in the whole fertilizer industry—a change so great that it is one of the most revolutionary moves ever taken at one jump in any industry. The hundreds of grades which have been so carefully built up by the various concerns, and the results of all the hundreds of thousands of dollars spent in buying publicity and good-will for them, are to be thrown together on the dump heap of outworn things. And in their place the fertilizer manufacturers of America announce that they are coming out into the open, with their sleeves rolled up to the elbows, so that nothing can be concealed, and telling us farmers the plain truth that it is not the name on the sack, nor what the agent claims for it, but the number of pounds of actual plant food—nitrogen, phosphoric acid, and potash—contained therein which really determines just what you and I get for our money. They seem, in fact, as I shall explain, to have gone considerably farther than this. More important still, back of this big change in methods there has been a big change in *ideas*. The old idea was that of selling the public what it demanded, whether that was the best that could be rendered for the money or not; the old idea was that business must be competed for on a price basis, and that to get his share of it the maker had to make his goods so that he could go his competitor one better on the matter of price. The new idea is that the more he can give you and me for our money the better business it is; and that if we happen to be mistaken in our conception of what we want to buy it is poor business to cater to our lack of knowledge, and the duty of the seller is to show us how we can do better.

I remember my first experience with fertilizer agents. It so happened that the running of the home farm fell upon my shoulders before I was through high school. Of course, in strict accordance with the old idea of education, I had had a smattering of Latin, French, and German, a look at Greek and a large undigested bite of trigonometry and astronomy; but in common with all the rest of my schoolmates, nineteen out of twenty of whom would have to make their living from the soil, I had as much information on plant nutrition, plant foods, and practical soil chemistry as a yellow-spotted fresh-water mud turtle has on the theory of the cycloid curve.

The first agent who found me at home of a Saturday morning early in spring happened to have on hand a ton of So-and-so's Market Garden Special, which had been shipped to a man who was sick and could not take it. He offered it to me at \$40, which was two dollars off the "list" price, on six months' time, and I was

satisfied that I had made a good buy. I was satisfied—for a week. The next Saturday another agent, one of those chaps with a tongue hung in the middle on roller bearings, with a self-starter and a splash oiling system, hunted me up. I told him that I had already bought, and he was just about to slip his order blanks back into his bag and pass on, when, discovering that I was anxious to learn something about fertilizers in general, he realized

manufacturers had been formed, was to give every user of any quantity of fertilizer a so-called "agency." In taking your best girl out for a Sunday afternoon buggy ride you would find a fertilizer agency sign on every third barn. And the general agent, the fellow who sold to (and appointed) all the little local agents, was hired not because of what he knew about soils, crops, and fertilizers, but because of his ability to "shoot hot air" about the

containing 3 per cent of nitrogen, 6 per cent phosphoric acid, and 8 per cent potash. If he was a large user, some agent, to get his order, would offer to have that special formula mixed up for him at the factory. His neighbors would learn about it, insist upon having the same thing—and another special formula would be added to the already overburdened list.

Ten or fifteen years ago there were a great many people who thought they knew more about fertilizer than the best authorities make any pretense of knowing nowadays. The idea that the exact scientific formula required for any special crop could be determined by making a chemical analysis of the crop, thus aiming to "replace in the soil exactly the chemical elements which the crop had removed from it," was quite prevalent. This, of course, was the foundation for another set of formulas.

The fertilizer men, being manufacturers, and not being able individually to carry on extensive research work, took these formulas from what they judged to be the best sources, and made their goods up accordingly. But there was no agreement among authorities as to just what was best for any particular crop, to say nothing of the further complications caused by varying soils. One of the country's greatest authorities in the Department of Agriculture went so far as to claim that any soil contained sufficient of the chemical elements to produce, if properly cultivated, a normal crop without the use of any fertilizer! Millions of practical farmers who had grown crops with and without fertilizer did not have to be persuaded that, whatever merits this theory may have had scientifically, in actual commercial practice fertilizing pays.

But, the more extensively practical experiments were carried on, the more convincing became the evidence that it is impossible to determine to the fraction of a per cent how much nitrogen or phosphoric acid or potash it will *pay* to put on any crop. And in the meantime the leading fertilizer manufacturers of the country had established under the name of the Soil Improvement Committee their own investigating bureau, composed of some of the best authorities on practical fertilizer problems who could be found. It was the purpose of this organization to help the farmer with his fertilizer problems, and especially to help him get back something better than \$1.06 for every dollar he invested in fertilizer. This broad-gauge policy on the part of the manufacturers was one of the results of that big change in the whole idea back of conducting the fertilizer industry which I have already mentioned. The realization that, in addition to "goods," the man who sells must deliver real service along with his commodity.

The more extensively the Soil Improvement Committee investigated fertilizer problems everywhere, and checked up the results of both scientific experiments and actual farm practice, the more it became convinced that the great multiplicity of brands which had come into existence was not only a big expense to the manufacturers, thus adding directly to the cost to the ultimate consumer, but that it was without any practical merit whatsoever. The Soil Improvement Committee finally recommended, and got the manufacturers, including practically all the fertilizer companies of the North, to adopt unanimously on January 24th of this year, the following resolution:

"*Moved:* That the subscribers of the Soil Improvement Committee stand behind the recommendations made, and use every means in their power to push the sale of those analyses recommended by the Soil Improvement Committee, and discourage the sale of any analyses containing less than 14 per cent of available plant food."

Compared to conditions which have existed up until this time, I'll say that is going some!

But not until you get a squint at the standard analyses which have been recommended will you realize just how much of a jump has been made. I have looked into it carefully [CONTINUED ON PAGE 20]



This is F. F. Rockwell at work. Mr. Rockwell is an Eastern farmer who knows his business from the ground up. He has spent most of his life on the soil, has made a study of the conditions he talks about here, and is at present manager of several big farms in the East. His home originally was in New England.

The World Does Progress, Even in the Matter of Fertilizer

IT'S a mighty balky mule that won't move when you build a fire under him. And it's a mighty indifferent business that won't try to get on safer ground when it feels the wrath of public opinion burning it.

The better element of the fertilizer industry realized that the shortcomings of its weaker brethren were putting the entire business under a cloud of suspicion, and this better element has been exerting strenuous efforts to put the whole industry on a sound basis.

The most progressive step to be taken by the entire industry is the adoption of a standard classification for fertilizers, effective with fall shipments of fertilizers.

Before you order your next lot of fertilizer write your state agricultural experiment station for its report of fertilizer analysis, and from this you will be able to judge which manufacturers uphold their guarantees.

THE EDITOR.

that he had an easy thing, and started in after it. As the result of an hour's conversation, down-grade on high gear, he persuaded me that the other man had taken criminal advantage of my ignorance by selling me a "market garden" fertilizer when I was going to grow potatoes and corn! And he finally succeeded, after making me a flattering offer of the "agency" in that territory for his particular brand, in getting my name down on the dotted line for a ton and a half each of his Wonder Potato Grower and Corn King Special at \$32 and \$28 per ton each, respectively.

It was not until some years afterward that I discovered that both lots of fertilizer had been made in the same factory, and shipped out under different brand names, and realized that the \$40 fertilizer had contained almost exactly twice as much actual plant food, from higher grade materials, than the \$32 brand, and more than twice as much as the \$28 brand.

That little experience of mine was no exception to the general rule. One of the objects in maintaining the great multiplicity of brands which existed in those days, and kept up even after an association including a great many of the largest

superlative merits of the brands he handled—and he could talk just as enthusiastically to Farmer Brown about one brand as he had just talked to Farmer Jones, three farms down the road, about another.

It was not altogether the fault of the fertilizer companies, however, that there existed such a multiplicity of formulas under the various brand names. No standards had been set. If, for instance, a farmer getting educated beyond the "patent medicine" conception of fertilizer sought information by writing to the editor of his favorite farm paper, his state experiment station, and to the Department of Agriculture at Washington, asking what to use for any particular crop, and then looked up some authority on that particular crop, he would get four very different answers. And where doctors disagreed, what was the farmer to do? If he tried one formula, which happened to have 2½ per cent of nitrogen, 5 per cent of phosphoric acid, and 7 per cent of potash, and succeeded in raising a good crop, he was persuaded that that exact formula was required, and would insist upon getting it. No one could persuade him to use, for instance, a fertilizer

Maybe Your Boys Could Do This Too— If They Had the Chance

By Thomas J. Delohery

DON'T try to tell me this hog is better than the one in the corner. If you do, you don't know anything about hogs," said the smaller of two farm boys as they gazed at a pen of Hampshire hogs at the International Live Stock Exposition.

"Aw, you're crazy," retorted the bigger boy.

"Crazy, nothing! You are talking through your hat, and if you ask anyone they'll tell you the same!"

"Don't get tough with me, you runt," said the big boy, "or I'll poke you one!"

"Try it once," replied the small boy, "and if you move I'll swat you one in the eye, and then tell Dad you hit me!"

Seeing a fight impending, which would, as I afterward learned, cause an infraction of an armistice which had been declared between the two boys for the week of the International, I stepped in, and acted as peacemaker.

"Aw, well it's his fault," said the smaller boy. "I'll leave it to you if I ain't right about the hogs."

"You ain't, neither!" shot back the bigger belligerent.

I settled the argument by asking them their names. The big boy said nothing, but handed me a card. On it was a picture of Hampshire hogs and:

TURNERY BROTHERS, IOWA
BREEDERS OF
PURE-BRED HAMPSHIRE HOGS
ALL STOCK REGISTERED
WRITE OR WIRE US YOUR WANTS; WE
CAN FILL THEM.

"Is your father a member of this firm?" I asked.

"No," was the reply. "It's me and Willie," waving his hand to indicate the smaller boy.

Willie by this time had forgotten the fight, and was all smiles. His little chest, too, was a few notches larger; but no buttons from his coat parted from the cloth.

I learned they were at the International, and had won five or six first prizes on their hogs; and some of their calves had won in the boys' and girls' contests. All told they took home about fifteen ribbons, there being more firsts than anything else, despite the fact that their hogs were pitted against the cream of the Hampshire hogs in the country.

Shortly after leaving the boys I met Rex Beresford of Ames, Iowa, who has charge of the boys' and girls' club work in the Hawkeye State. I asked him about the Turney boys, and he immediately told me how good they were; and how they started four years ago with one sow each, and now have 500 pure-bred pigs and hogs, and are recognized as among the leaders in the Hampshire breed. Moreover, he said that they had branched into the sheep business, and were dabbling in pure-bred cattle.

"And don't forget to have them tell you how they cleaned up at the Iowa and Nebraska state fairs, and at the National Swine Show," he added as we parted.

The next day I met John Turney, the father of the boys. The youngsters were with him at the time, and I had a hard time to believe he was their parent. He acted more like a pal to them—in fact, I found the three of them playing tag.

In our talk I gathered that he let the boys run the business. They showed everything in the ring, bought and sold their own stock, answered their own correspondence, and raised their own feed. Moreover, in addition to this, both of them are going to school at the present time. He helps them only when requested; and before the boys do anything they always seek the opinion of their parents, despite the fact it is their own business.

Johnny Turney, the oldest of the two boys, is sixteen years of age, and in the third year of high school, while Willie, who is thirteen, is in the eighth grade. Both boys are very good students, but John is looked upon as being the best scholar, because he is a better penman than Willie. However, considering their ages and grades,

they are about equal. Willie is an awful scribbler, but he is some salesman; and the ability of both boys has won them recognition among swine breeders. Everyone knows them.

Willie is the better judge, and even beats his father. He sticks tenaciously to his selections, and Mr. Turney tells me it is often necessary for him to come in from the field to settle an argument between the two boys when they get to looking over their hogs.

Mr. Turney tells a good one on Willie.

the boys bought a boar of their own. The pigs were good rustlers, and the boys became intensely interested. This started them in business. They sold some of the pigs the next year, and bought a few more sows of better breeding, having learned the best families of the Hampshire breed.

"For four years they have been breeding and selling. They know the business, and I don't interfere. It is their business, and they want to learn, so why should I interfere? However, if they are going to

and we sold one at the International for \$600.

"Last summer I took my truck and the two boys, and we traveled over 22 counties of the State, looking for better breeding stock. We were out four nights and five days, and had a dandy time. It was warm, and we slept in the car.

"The boys liked the trip very much, for whenever we'd get hungry, and it was between meal time, we would load up on cake and ice cream. We visited the state college at Ames, and bought a bunch of pure-bred Southdown sheep, too.

"At Independence, Iowa, we 'stole' a boar—that is, everyone tells us we stole it, when we tell the price. We all blame it on Willie, for he saw the animal, and insisted that we buy it, even though Johnny and I were not favorably impressed. I paid \$150 for the animal, and I thought it was a poor buy, for the animal was dirty and unkempt and looked anything but a champion, which he proved to be. We put him in the car, took him home, washed him, and put him at the head of the herd. He's worth \$2,000 now, and is some herd leader. You ought to see that fellow's pigs.

"We showed this boar at the Iowa State Fair, and in a class of sixteen, representing the best in the country, he finished fifth. At the Nebraska fair we met the champion from Des Moines, and beat him, landing on top of the heap. There were twenty-six in the class this time. In the spring boar class at Des Moines our spring boars took first and second in a class of sixty-six animals.

"At the National Swine Show the old boar made fourth position, and we won the blue ribbon in the spring boar class. Pretty good old sire, which we would never have had if Willie were not the judge he is.

"For business partners I never saw such a pair of scrappers. They argue every day over the different points in pigs. Each one picks out three or four, and of course they are the best. Sometimes I have to come in from the field and threaten the woodshed in order to settle the row. I never would whip them for anything like this. Instead, I would encourage it, only it might result in real mutiny. They are learning all the time.

"The boys can pick out defects too. They argue about bone, quality, hams, lines, and things which judges take into consideration when placing blue ribbons. Willie is the better judge of the two, and the better salesman. A man who wants to buy Hampshires and gets away with any money is lucky.

"It was Willie who prevented us from castrating the bull calves. One brought \$600, and the other will bring a nice price too. Johnny handles all correspondence we get. He has a regular desk, a typewriter, and a filing cabinet for his letters and pedigrees. Willie doesn't bother with this stuff, because he isn't the herdsman.

"We have no one to care for the pigs. I look after them while the boys are at school, but they feed them when they are at home. They are real interested, and I don't have to tell them to do the work. They are real anxious to be with the pigs. Willie gets up early every morning and goes to town for skim milk for the pigs, while Johnny feeds the grain. When this is done they go to school.

"My little girl, Jennie, has also a few pigs; but I don't think she will have them very long. In the last week or two I have had to get ear tags for them, so that she will know what belongs to her. Before this the two boys would get scheming, and the first thing I knew Jennie would be shouting, 'Stop thief!' The boys would split up the best of her pigs, each claiming ownership of a part of them. I have to give them back to her.

"Ma and me think the world of the kids, and are real proud of their ability. We never worry about their not staying on the farm. They like their hogs, cattle and sheep too much to move."

While talking with the boys I noticed Johnny had a fine gold watch and chain. I asked him where he got it. His reply was that it was the first premium in their calf club. I turned [CONTINUED ON PAGE 37]



The Turneys—Father, Johnny, and Willie

It Doesn't Pay to Do Too Much for Your Children

NOT long ago we watched two robins teach their brood to fly. The youngsters teetered dizzily on a limb. Father looked serenely on from his perch. Mother hopped around nervously. Presently she skimmed over to the children and set them an example, fluttering from their perch to a lower limb. Father followed suit. Then one of the little fellows tried it. Very wobbly. He tried again. So did the others. By evening they could all fly.

Those youngsters made mistakes. Of course they did. All youngsters do. But the parents corrected them, and they went on trying until they succeeded on their own. Your youngsters will make mistakes. But just show them how and let them try it. They'll have to live their own lives sooner or later, and you might as well help them to learn how instead of trying to do everything for them. Turney tried it with his boys, and it worked. Personal responsibility is a great teacher. We ought to send our youngsters to school to it more. THE EDITOR.

It always gets a laugh from Johnny, and everyone else. Willie made his father buy an 80-acre plot across the road from their farm, telling him he would pay for it. The dad did, and it looks like it will be paid for in a year or two.

Four years ago their father offered each boy \$25 in money or a bicycle. Johnny accepted the money right off, but Willie wanted a few days to think it over. He talked with some of his chums at school, members of the calf club, and finally took the money.

"With this money and \$10 he had saved," said the father, "Johnny bought a pure-bred Hampshire sow. Willie looked around and found one which was worth \$40, so I lent him the additional \$15. Johnny's sow gave him a litter of six pigs in the spring, but Willie's was a non-breeder. The man took her back, and gave him another. The fall farrow was only four pigs, while Johnny's got six more.

"The spring litter was fairly good, and

do anything they ask both mine and their mother's advice.

"Now the boys have from 500 to 600 spring pigs and breeding stock, and I expect they will have sold all of them by next spring. Around the show circuit this year they sold more than \$5,000 worth of hogs, and before the end of the year I expect the total sales will be \$7,000 or more.

"We have won a number of prizes at the Iowa and Nebraska state fairs, the National Swine Show, and at the International. This helps out business, and you would be surprised how breeders make friends with the boys. They are known everywhere, and the Angus breeders want us to join their association. The boys have shown a few Angus calves in the calf clubs, and have won many prizes.

"We had two Angus bulls, which were sold to the boys to be cut as steers. Willie said both of them would be better breeders,

Why I Don't Have to Work So Hard on My Farm Any More

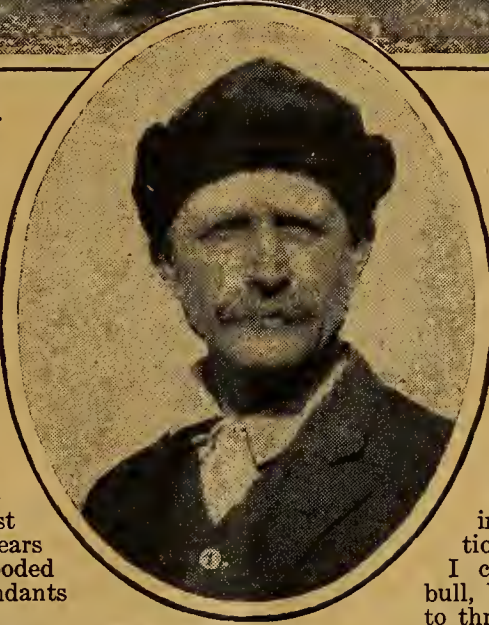
By Charles Foss
(In an interview)

CHARLEY FOSS is one of the few men in northern Illinois who is making money with cows. He is a member of the Farmers' Institute and of the board of advisers to the dairy department of the college. He figures his farm nets him about 10 per cent and a living. He was born fifty years ago at Buena Vista, Illinois, a short distance from where he now lives. He has two girls and one boy. One of his girls is married, and he gave her husband a start in farming. The other has just finished high school, and the boy is in college. In Freeport, Illinois, his reputation, were it rated in a book, would be A1. He is a great reader, and books concerning dairying are his long suit. He never quits looking up ways to better his farm and to make work easier. **THE EDITOR.**

DID you ever flounder around, know you were not doing right, but have no evidence to disprove your method or hunch? I did that for four years, and all the time I thought I was "milking the cow on the left side." This was during the first four years of my experience as a dairy farmer. Since then I have changed to the right side of the animal, and incidentally to the right side of the ledger. Fourteen years of dairying have been profitable to me because I made this change. Last year, from 96 acres and 16 cows, my books showed a net profit of \$3,000, and the total income to be a little better than \$5,000. This may sound a little strange in view of the fact that dairy-men complain they are losing money on milk at present prices, but those are my income-tax figures. For four years I was a failure as a dairy farmer; for fourteen years a success. During the fourteen years I have been able to improve my original investment, and now my 96-acre farm and equipment, with the live stock, is worth \$30,000; but I don't want to sell. I quit teaching school to take up dairying in 1900, when thirty-two years of age. I bought a bunch of Shorthorn cows, and after milking them a while knew they were not making me any money. I didn't have anything to go by, but this was my belief. I didn't know anything about feeding—all I knew was how to take the milk from the cow, pocket the milk check, and wonder why I wasn't getting rich. I read a lot of books on dairying, but somehow or other nothing came up to disprove my methods, and to show me how I could make money. I sold some of my cows—the ones I thought weren't making a profit. The only way I had of telling was the appearance of the animal. Truthfully speaking, I didn't know whether I was right or wrong, but I did it anyhow. In the last fourteen years I have learned a different method of determining the profitable and unprofitable cows in my herd. It is scales, records, and rations. The turning point in my business was in 1903. At the time I attended a lecture on dairying at a local Farmers' Institute. Mr. A. J. Glover, then with the University of Illinois, told me how he weighed milk and tested for butterfat as a means of discerning the unprofitable cows. At the conclusion of his lecture he declared he was glad to visit any farmer, and to help him if possible. As soon as the meeting was over I called on him, and stated my case. He said he would be out to my place in a few weeks; that his work was so pressing he couldn't visit me before then. I thought this was a diplomatic way of putting me off, but to my surprise he showed up one bright day, and I turned from the path of failure to the road of success. He advised me to get a pair of scales and

weigh the milk from the individual cow every day, and to take a sample of each cow's milk night and morning. This I did, and sent the samples to the college, where they were tested for butterfat. Since that time I have been using a scale and the

breeding; and I expect next year will show a big increase, as I am about ready to breed the heifers sired by a pure-bred Holstein bull, Illini Bona Homestead, which I bought from the University of Illinois two years ago, when he was two years old.



Babcock test myself. Immediately I began to find out my cows, and I weeded out the poorest producers and kept the best. The poorest went to the butcher—I never sell an unprofitable animal to a farmer. By weeding out and breeding up I have improved my herd very materially. All but a few animals are pure-bred. I bought my first pure-bred cow ten years ago, and all of the blooded stock I have are descendants from this animal. Through Mr. Glover I got in touch with the university dairy officials, and have been connected with them ever since. I have found this connection considerably desirable, as I will explain later on. In 1903, the first year of testing, the

This bull's first ten sisters, as two-year-old heifers, made production records of more than 14,000 pounds of milk and 600 pounds of fat, and one of his sisters holds the production record for the State of Illinois. When I learned the value of a good sire from the university men, I immediately began to improve the production capacity of my herd. I could afford to buy a bull, but I could not afford to throw out all of my low-producing cows, and replace them with better stock. The following figures show what is possible through the use of a good sire on grade cows. But first let me say that under the old system of dairying the herd always suffered a heavy reduction in milk as a result of

It is the studying out of points like these that make for production like this:

	Milk, lbs.	Fat, lbs.
Cow No. 24.....	11,199	397
Her Dam.....	8,199	264
Increase.....	3,000	133
Cow No. 36.....	10,000	419
Her dam.....	6,141	335
Increase.....	3,859	84
Cow No. 38.....	9,289	328
Her dam.....	8,811	319
Increase.....	478	9
Cow No. 21.....	11,289	380
Her dam.....	7,614	246
Increase.....	3,675	134
Cow No. 32.....	9,603	335
Her dam.....	7,614	246
Increase.....	1,989	89
Cow No. 17.....	8,912	361
Her dam.....	5,970	270
Increase.....	2,942	91

And, as a check on these results, I bred Cow No. 6, which produced so well, to a grade bull. The calf is known as Cow No. 10 in the herd. Her record is 8,199 pounds of milk and 264 pounds of butterfat. This record showed a decrease of 122 pounds of fat when compared to her dam. The same cow, No. 6, when bred to a pure-bred sire, calved cow No. 24, and her record, compared with that of her dam, shows an increase of 3,000 pounds of milk and 132 pounds of fat.

When I first started into the dairy business, corn and hay were the only feeds I knew. Balancing rations were Greek to me; I didn't even know there was such a practice. I just piled the feed in the racks, and let it go at that. My only concern was that the cows had enough to eat. I didn't know that feed made any difference in production; but when the university officials pointed out that corn and hay were not the only feeds, and that a balanced ration was highly essential to profitable production, I started off on a new tack.

The experience I have had in breeding up my cows for production shows any dairyman what can be done with grade cows. Milk and fat production are the only indications of a good cow, and the first lesson I got in weighing milk and testing it for fat was with Cows Nos. 6 and 7. It was necessary that I number the cows for the records. These cows—6 and 7—stood side by side in the barn, and received the same feed and care. No. 7 was a Shorthorn, of the dual-purpose type, while No. 6 was a well-bred Holstein cow. Outwardly, one was as good as the other.

My scales, however, told me a different story. At freshening time they showed that the Shorthorn was giving as much as the Holstein; but before the test was over there was a different tale to tell. The Holstein cow had produced during that period 9,802 pounds of milk, testing out 386 pounds of fat; while the Shorthorn cow gave only 4,701 pounds of milk, containing 167 pounds of fat. I could readily see which cow I should keep. No. 7 was sold right off.

Cow No. 6 was of dairy breeding, and she was in my herd for years—in fact, until she was seventeen years of age. At the age of thirteen she freshened and milked twenty months and twenty-one days, giving a total of 17,000 pounds of milk and more than 700 pounds of fat. Two years later she practically repeated this performance.

The end of the first year showed me surprising difference in my cows, which I had been testing. It showed me I had good and poor producers, and accordingly I set about to build up my herd by both buying and breeding. The second year showed more reasons why I should use scales, and the third year of testing—my seventh in the business—clinched the argument.

During this time I had to learn to balance rations, and to know what feed meant in production of milk and fat. I had to study the [CONTINUED ON PAGE 38]

This is the Day of the Man Who Uses His Noodle

DIG down into the causes of any man's success and you will find that it is based more on work he did with his head than on anything he ever did with his hands. Good, hard physical labor is fine, if you don't carry it to extremes, but the human being progresses by brain, not brawn.

Yet, probably you would say we were a swivel-chair fool if we told you you didn't need to work from dawn until dark on your farm. Nevertheless, we do tell you just that. There is a way you could systematize your work so it wouldn't grind you down physically. Foss used his head, and found the way he could get off easier and still make more money. You can find yours if you'll set your mind to it.

THE EDITOR.

average production per cow was 3,560 pounds of milk and 135 pounds of butterfat. Now it averages about 9,000 pounds of milk and about 315 pounds of butterfat. This increase came through selection and droughts or short pasture in July and August, but with soiling crops, early corn and clover, this does not bother me any more. I also have a silo which I can fill twice a year—or more, if I have the corn—and this silage can be used when the grass is short.

Where You and I Have Got the City Fellows Licked

By Bruce Barton

IT IS snowing outside as I write this, and the wind is snarling savagely. Yet sitting here beside the open fire I laugh at its snarls, for I know that they are merely the bitter confession of defeat. Winter is on the run; she has been handed the armistice terms, and, whether she likes them or not, she will be forced to accept. On April 15th, or thereabouts, she will be compelled to throw up her hands and acknowledge surrender—and I, who have suffered her outrages for several months uncomplainingly like a brave Belgian, will celebrate my victory over her by an annual triumphal march to Foxboro, Massachusetts, the land of the free and the home of all the old clothes that I have accumulated in five years of careful hoarding.

There is another reason for the special cheer with which I listen to winter's fury on the outside. Beside me lies the book which next to the Bible has afforded me more real pleasure and instruction than any other book I ever owned. It is a great book, filled with pictures various and alluring. Glancing over its pages one finds his acquisitive instincts thrilled as by no other volume anywhere. Everything that a man could desire, from a teething ring to false teeth, from a safety pin to a gold-headed cane, from a rattle to a wheel chair, is here. So often I had thumbed its pages that I thought I knew every one of its mysteries by heart. Yet only just now I have discovered another one pictured and described in words full of promise:

Ajax ram-pump \$7.50

Underneath me, in the cellar of this suburban house where I am compelled to spend a portion of my life—compelled by the stiff-necked refusal of magazine editors to move their offices and their magazines to Foxboro, Massachusetts—underneath me I hear the demoniac clicking of my city water meter. And again I smile. For that single line of bold-faced type marks another step in my triumph over fortune and circumstance. I have a brook on my farm at Foxboro—a swift-flowing, rippling brook with a good stiff fall. And somewhere in the bottom of that brook next summer I shall conceal an Ajax ram-pump \$7.50. I can get the \$7.50 somehow; more than once I have gotten together that amount before, and I know I can do it again. And then on the porch of my ancestral home at Foxboro, with my pipe of many seasons clasped firmly in my lips, I shall sit and take my ease, while before me water bubbles in an ever-flowing fountain, and away in the brook I shall hear the soft music of the Ajax ram-pump \$7.50, whose clicking and murmuring costs me not a cent.

And I shall smile; yes, I shall exult, as one who has added a cubit to his stature in the struggle to raise his head above dependence. For I shall have conquered another great element and made it obedient to my will. I shall have free water hereafter four months in the year. Fresh, sparkling water; water that pays no toll, and bears no contamination of the income, excess profits, or corporation tax. All the powers of Wall Street may thunder against me; Congress may grow black in the face with fury that something should have escaped its levying power—their fury will not budge me an inch. Secure on the porch of my castle, I can laugh them to scorn—and away in the bed of the brook the Ajax ram-pump \$7.50 will hear me, and by its clicking echo my mirth.

Let me go back a little to the beginning of this business. Let me start with the frank confession which is, according to high authority, so beneficial to the soul. I am, then, a man by nature indolent, by taste a farmer, by force of circumstances a writer of pieces for the magazines. The combination is one not without difficulties and dangers. In a very old and very interesting volume, which is unfortunately not read as often as it deserves to be, in "The Letters of an American Farmer," the author tells of the consternation produced in his household by his announcement that he felt called upon to do a little writing on the side.

"If thee persistest in being such a fool-hardy man," said my wife, "for God's sake, let it be kept a profound secret among us; if it were once known abroad that thee writest to a great and rich man over in London, there would be no end of talk of the people: some would vow that thee are going to turn an author, others

"who must have married rich, as he never seems to work." And in New York no one can understand why I will, at the slightest opportunity, leave the lighted streets and partly lighted street cars for "some God-forsaken spot up in Massachusetts." Such false friends are urging me constantly to leave the farm; even—as I see by the

be—the house patched up and covered with the all-kindly white paint; the rude grounds transformed into a lawn, sloping down to the lake at the rear. So they stayed, and purchased, and for all the years of my boyhood our summers were spent barefooted on these premises.

To this spot my wife and I came for our honeymoon, and, yielding to that sense of infinite prosperity and glorious promise that comes to a man only on his honeymoon, we said, "We will have a summer home." Think of it, a summer home, when there was rent to pay in New York and no special assurance of its payment. A summer home—only youth could commit so splendid an extravagance. We found the home, directly across the street from my father's; and shortly after it was ours.

It consisted of a little white cottage and about a quarter of an acre of land, and a lake which—like all lakes, thank Heaven!—belongs to us and whoever is wise enough to appropriate it as his own. Gradually, during the five years, we have added to our territory. Asa Young, with whom I played cribbage on many an oil-lit evening, and in whose company I have caught pickerel, wading in the "Bogs" up to my waist—Asa grew mellow, as fruit ripening on the trees, and at length painlessly and quietly dropped off. Asa's sons had moved away, and the estate was to be closed up; so for a sum I bought and added to my little piece another great empire of perhaps half an acre, an empire contemptuously referred to in the neighborhood as "the swamp."

Swamp, indeed! Only men of no vision could have so regarded it. Viewed through the practical eyes of Faith it revealed itself, not as a swamp, but as a sunken garden of splendid spread and possibilities. A little clearing with the ax, a little judicious distribution of drain tile, and, behold, what was once a sunken waste becomes a gracious rolling area, watered through the center—and drained—by a flowing brook! And looking upon it one has for just an instant an echo of the feeling of the Creator on that day when He spoke, and behold the dry land was separated from the waters.

Another year a certain good man named Angell, who held the land on the other side of me, and much other land besides, passed also to his reward; and again another empire was added to my holdings. Measured vulgarly, it comprises not more than two or three acres, perhaps; but actually it contains all the most important elements in the world. Cleared land it has, fit for gardening, and so much woods that every winter more trees and branches die than I can burn in my fireplace all spring and fall; and it stretches itself along the shores of a lake where a man may cast in his line at any time and find fish, or, casting in himself, come out quickened and refreshed.

So my ancestral home stands now at the bottom of a little valley, and my broad acres stretch away almost to the top of the hill on either side. Standing at a certain point in my estate I can at will summon that fine, expensive feeling which comes to one who is "monarch of all he surveys." For from that certain point I can look in all directions and see no man's territory but mine own.

On various occasions in my life I have dined in the home of rich men, where a valet slipped into my room and laid my mended pajamas superciliously on the bed, when I was not looking, and a butler watched me eat, hurrying away into the kitchen now and then to report to the cook that I had used the wrong fork. I have sat thus in the seats of the mighty, I say; and on such occasions I have looked at my host with a certain pity. How pathetic a thing it is, I have said to myself, that a man should have so much more money than I, and be able to buy nothing with it that I do not already own!

For, after all, what can he buy? A roof over his head. I, too, have a roof; not so wide, but just exactly as water-tight. He cannot bribe the stars to shine any more brightly over his acres than they shine over mine in Foxboro; nor will any lake afford him a more invigorating bath. More clothes he can own than I, but they will not drape [CONTINUED ON PAGE 42]

No, Happiness is Not a Question of Geography

PERHAPS you have

read the story or

seen the play called

"The Bluebird." In

it the wood chopper's

little boy and girl,

Mytyl and Tytyl,

travel all over the

world with the Fairy

Godmother, seeking

the Bluebird of hap-

piness. And at last,

not having found it,

they return to the

humble cottage in the

forest; and there, right

in their own home, they find the

Bluebird waiting for them. They



Bruce Barton, himself

have searched every-

where, only to find that

happiness comes only

from within them-

selves, from making

the most of what

they have where

they are, and that

they may seek it

outside themselves

the world over for

years without end,

and never find it.

Bruce Barton merely

says the same thing,

in other words, here.

He has found it true in his life.

And it is true. THE EDITOR.

would pretend to see some great alterations in the welfare of thy family; some would say this, some would say that. Who would wish to become the subject of public talk? . . . Some would imagine that thee wantest to become either an assemblyman or a magistrate, which God forbid. . . . Therefore, as I have said before, let it be a great secret as if it was some heinous crime; the minister, I am sure, will not divulge it; as for my part, though I am a woman, I know what it is to be a wife. I would not have

papers—other farm boys are being constantly lured away. But in my case there is no danger. Sociologists need hold no conventions to discuss the drift from the farm, so far as I am concerned. I will not drift. In New York I make my living, but in Foxboro, Massachusetts, I live.

We have owned our farm in Foxboro for only the five years of our married life; but my own connection with it goes back far beyond that—back to the day when my father, then a clergyman in Boston,



This is "Mike" and "Betsy," "soaking health into their systems" in "the sunken garden"

thee, James, pass for what the world calleth a writer; no, not for a peck of gold, as the saying is."

The American farmer had his own troubles in the attempt to combine an honest occupation with writing; and I, too, have mine. In Foxboro there are men who look at me a bit askance, wondering how it is that one who does seemingly no work can afford to support a farm. "A kind of crazy fellow from New York," they say,

started out with my mother to find a place where one might turn five children out to pasture in the summer without interference from the police. They came at length to Foxboro, and stopped at the little run-down cottage at which the real-estate who conducted them snorted audibly. It was his idea of no place at all—too far from town, and too much given over to ruin and decay. But my father's larger vision saw it as it might some day

If You're Not Making Enough Money— Maybe This Tells Why

By Alvin Johnson

MR. JOHNSON is first of all a man of the soil. He understands and appreciates the problems that confront the American farmer, because he himself has stacked up against them and battled with them as a farmer. He lived many years in the Middle West, and at present is devoting his time to farm economics and pro-farm propaganda. He is an associate editor of "The New Republic." We hope to print more articles from his pen from time to time.

THE EDITOR.

EXCEPT the farmer, every kind of intelligent laborer is trying to establish standards of wages and effort for his trade. What he demands is a decent living in return for the amount of work an average man can do, year in, year out, and not feel the worse for it.

There are plenty of men in every trade who would be able, individually, to get on very well without such standards. Everybody knows young men of nickel-steel constitutions who could put in twelve hours' work a day at bricklaying, blacksmithing, or any other kind of hard work and not wear out, so far as can be seen. Everybody knows men who can live on next to nothing. But the work of the world is too vast to be carried on by the few who can stand everything, long hours, low wages, hardship, and deprivation. It has to enlist the average man, whose health has to be safeguarded, whose happiness requires wages sufficient to support a family decently.

It is a fair rule that no class of working man ought to be content with conditions for themselves that they would hate to see applied to their sons. If your trade is not good enough for your son it is not good enough for you, and it is your moral obligation to strive to improve it. That is what the railway workers, the carpenters and bricklayers, the miners and quarrymen, the iron and the clothing workers, are doing. It means a long fight and a hard one, but they expect to succeed, and ought to succeed.

Now, what are you, as a farmer, doing to establish living standards for your occupation, call it trade or profession or business, as you please?

One hardly dares even to put the question—so many persons, city men, and farmers too, will assert that it reveals I have never seen a farm. How can there be standards for an occupation in which some men are always industrious, always alive to the demands of the market, to improvements in stock and seed and fertilizers, while other men are hopelessly lazy and unprogressive?

What kind of equal standards can be established for men with large farms, rich land, good equipment, and men with tiny farms, stony soil, and scarcely any machinery? Well, those difficulties have analogies in the other trades. There are carpenters who always hit the nail on the head, and other carpenters who divert themselves pounding their thumbs. The poor ones get fair pay when they work; but they are out of a job most of the time, and poor as a loafing farmer. There are carpenters who have a share in the business and get profits besides their wages. It is undesirable, and, moreover, impossible to standardize the whole of a man's income. It is not impossible to standardize that part of a man's income that comes from labor.

If you have land and buildings and stock worth \$10,000, you have a right to interest on \$10,000, and fair pay for your labor besides. But how can we say what you get for your labor? Subtract from the value of what you sell off the farm the value of what you buy to be used up on the farm—feed, fertilizers, and the like, but not living expenses—subtract from the remainder an amount covering wear and tear of machinery, depreciation of horses and milch cows through advancing age; subtract also wages paid for hired labor, and

fair interest, say six per cent, on the value of your farm and stock. What you have left is the pay you receive for your labor of body and mind.

That is where standardization ought to come in. If you are a man of average strength, industry, and intelligence your labor income taken by itself ought to be sufficient for the decent support of a family according to good American standards. What would that be?

A man who is industrious and intelligent enough to make a living by farming would in our Northern States earn between \$900 and \$1,200 a year if he had gone into a manual trade. Living on the farm is cheaper, and it may be fair to knock off \$200 or \$300 on that account.

If then you are a good average farmer, and find that you are not getting a labor income of between \$600 and \$900, there is something wrong, either with your personal circumstances or with your occupation.

If it is your personal circumstances that are at fault, you owe it to yourself to try to correct them. If the fault is with the occupation in general, you owe it to your sons, if you have any, to try to raise its standards. You don't want to bring up your sons in an occupation where they will not have a square deal. Or if, in spite of everything, you want to keep them near you, believing that even hard work and low pay in the country is better than high pay with cramped living quarters and uncertain employment in the cities, you will find that if you have good, average sons they will have something to say about it.

Look at the hosts of young men leaving the farms. In every trade and profession and business you find the farmer's sons. They are making good, and of a thousand you talk with not fifty want to go back. That is proof enough that standards of labor income are needed on the farm.

It is all very well to talk, but what is to be done about it? The great majority of farms in this country won't pay labor incomes of \$600 to \$900, besides interest on the value of farm and equipment. They won't, no matter how well they are farmed, unless the prices of agricultural products are kept somewhere near war-time levels. And that is something we can't count on.

We are still an exporting nation, and will have to sell wheat and meat in competition with Argentina and Russia and Rumania, where sooner or later production will be immense and at low prices.

We have to face the prospect of prices not much higher than they were before the war. Perhaps we can work out a plan for cutting the cost of distribution, so that the farmer may get a larger share of what the consumer is able to pay. The Danish farmer has managed that through co-operation. Even the Siberian farmer was learning how to keep the middleman's profits for himself, before the war. Are we to acknowledge inferiority to Danes and Siberians in business sense and capacity for organization? But that is another phase of the question. We shall need to do everything we can to assure the highest practicable level of prices to the farmer through improved and cheapened transportation, through more systematic distribution and marketing.

But there is something else that comes first. That is the determination of the conditions of efficiency under which a living income may fairly be demanded.

The first thing that has to be done before any occupation can be standardized is to standardize equipment. An artisan can't make wages unless he has the proper tools or machinery to work with. A grocer or butcher will starve unless he has a good shop stocked up to a fair average. It is just the same with a farmer. If he does not have a farm of the right size, with the proper kind and amount of stock and machinery, all the energy and intelligence he possesses won't save him from a mediocre financial showing.

To be sure, you do sometimes find a man who succeeds in making a fair labor income out of a 20 or 30 acre farm, not by market-gardening or pheasant-raising, but by general farming. The man is a genius, and he is probably putting in more hard thinking, more toil and anxiety than Mr. Hines is applying to the running of all the railways of America. This is the rule the world over.

The little farms of Belgium, France, and Italy look very sweet and smiling to the tourist. Not a foot of ground is wasted, not a weed is allowed to grow. The still smaller farms of China look even better to the tourist. There each wheat or rice stalk comes in for the farmer's personal attention. But the small farmers themselves, in Europe and the Orient, are a starved and overworked lot. We in America would like to see our farms well cultivated and each acre made highly productive. But we are a democracy, and our farmers are of a thousand times greater importance to us than our fields. Better reduce the proportion of our population engaged in farming, if that is necessary, and have the farmers we do have healthy and prosperous and contented. And if they are to be such, we must exert ourselves, individually and as a State, to provide the farmer with the equipment necessary for efficiency.

Just what should this standard equipment be? It will vary, of course, for different parts of the country and for different types of farming. It will vary also according to the level of prices. When wheat sells at \$1 a bushel the farmer has to have a large acreage if he is to make a good living. He cannot afford to devote much time to making the most possible out of every acre. When wheat rises to \$2, a smaller acreage better farmed pays better.

Before the war the farm that was most likely to pay interest on itself, and a living wage to the farmer besides, was one with 150 to 200 acres, mostly capable of cultivation, well provided with buildings, stock, and machinery. Such a farm was big enough to use the labor of two men, and to take [CONTINUED ON PAGE 19]

Costs—the Greatest Joke on the Farmer

By James H. Collins

ACITY business man bought a farm and turned agriculturist in his spare hours. He had read a good deal about successful, scientific farming, and the money made by handling everything in a big, modern way—crops, rotations, cultivation, fertility, fine breeds, good machinery and buildings. His reading dealt chiefly with thousands of dollars. So he spent money freely for machinery, labor, seed, fertilizer.

Being a business man, he kept accurate cost records of everything. When the time came to sell his products these records showed heavy losses everywhere. But they also taught him that you have to watch all the little items on a farm. Profits from an acre of land are secured, not in thousands of dollars, but often in a \$5 or \$10 bill. Money spent in good methods will show profit, but farm operations do not offer the same field for heavy expenditure as does industrial production.

The farm next to this city man's place was run by a real farmer. The city man went over to get some advice. His neighbor seemed to be making money—the farm and family were prosperous. When they compared notes the agriculturist found that the farmer had few cost figures. Yes, he paid the hired man so much a month and his board, but did not know what it cost him in wages to plow and seed 20 acres of wheat. He got so much for his apple crop last fall, but did not know what it cost him to raise and pick the fruit. He remembered when he bought his harvester, and how much he paid for it, but knew nothing about the machinery per acre cost of raising grain.

When the city man went back home he knew how he lost money and how his neighbor made it. For every item of wages, machinery, interest, and expense generally had been faithfully charged against the agriculturist's crops, while the farmer had charged only incidental items actually paid out of pocket.

"What did it cost me to pick my apples?" he said in surprise. "Why, practically nothing—we all turned out and did the job ourselves!"

Which was the same as saying that the family picked apples without pay. And that is the greatest business joke on many a farmer—that the work of himself and his family is thrown into farm production gratis, and that if accurate cost records were kept, and reasonable wages given Mother and the girls, and the boys paid like the hired man, many products would show a loss, and in the light of cost figures the farm would be turned to raising other things that pay.

One day a machinery salesman came along and tried to sell a gasoline engine and pumping rig to a farmer. The latter hesitated to pay \$50 for the outfit. They had always pumped water by hand, and figured that it cost nothing. But by a few cost figures the salesman demonstrated that this family had been pumping water for about five cents an hour, for many years, because a gasoline engine would pump for that amount.

"Are you willing to work for five cents an hour?" he asked. "I should say not!" replied the farmer. "I want that engine and pump rig."

Cost figures are like magic spectacles when used to view business operations, farming no less than factory or store. They show country people working at wages which no European peasant would tolerate, and often working for nothing. They show where crops and animals are being sold for less than it cost to raise them. They show where capital can be invested in machinery, buildings, and comforts to enable the family to produce more salable stuff with fewer hours' work, and easier work.

Every business house must have an accounting department. Every farm should have one. The business accountant is given an office, a desk, and suitable working tools. The farm accountant should begin with these same essentials. There should be a little office in the house or barn, with a desk, account books, and writing materials—perhaps a typewriter for farm correspondence. Very often separate places for entering records around the farm are a convenience—one in the milking shed, another at the grain bins or scales, so that figures can be jotted down on the spot and later taken to the office.

Then a cost-accounting system is needed. Such systems usually look complicated when one examines the various forms for keeping figures and the different books that must be posted and balanced. That is too bad, and part of the joke on the farmer who assumes that bookkeeping is superfluous drudgery. For the systems are really simple as soon as one begins to do the work, and call for not more than five or fifteen minutes' writing and figuring daily. Uncle Sam will send anybody a complete system on application to the Department of Agriculture, Washington, D. C. It is contained in Farm Bulletin No. 572, and is called "A System of Farm Cost Accounting." Only three books are kept under this scheme: 1. A record of all work done by men and horses. 2. A record of all money received and spent. 3. An inventory of machinery, animals, crops on hand, and like items at the beginning and end of each year.

A Farmer's Thoughts on Jury Service

Being to the effect that entirely too much time and money are wasted by the courts, and suggesting some remedies

HAVE just returned from four weeks' jury service at the county seat. As a result I have some very decided opinions. I know it will relieve me to express them. It may be of interest to other farmers to read them.

To begin with, I was too old to fight; at least, the Government thought so. My oldest boy was too young. When the carrier brought me a notice from the sheriff ordering me to report for jury service at the county seat, on such and such a date, I said to myself, "Here is a chance to serve my country, it is a man's duty to serve on the jury, just as much as it is his duty to serve in the army, if he is called." Well, I am not so sure about it now. Respect for our courts is the very foundation of our governmental structure. But, man alive, how the courts do waste time and money! Let's go into particulars a little:

Fortunately, I was called for the January term of court. Farm work was rather slack. Of course, there was the regulation number of winter chores—stock to feed, milking, and so on—but with two boys (one past twelve, the other ten) and an efficient wife, it was possible for the family to get along without me for a time. Had the summons been for some summer term I don't see how I could have served. I did not ask to be excused. I am proud to say that not a single farmer out of the eighty-four men summoned (and there were about twenty-five or thirty farmers altogether on the panel) asked to be let off. Not so the city men, however. I never heard of such an assorted lot of flimsy excuses, and most of them went with the court, too. It was necessary to call a second list of jurors within a few days, so many town men developed deafness, important business, or chronic maladies within a few minutes after receiving the jury summons.

The farmers stuck, however, although service was every bit as much of a hardship on them as on anyone else—more, because almost all had to find boarding houses and stay in town overnight, while the town men had their homes to stay at as usual.

I served four full weeks. What did I accomplish? Three things only. I turned a man loose on a flimsy, trumped-up criminal charge brought by his wife in an attempt to compel him to pay her alimony. I convicted a poor barber of bootlegging, and had the "satisfaction" of seeing his nine-year-old boy break down in court and cry as though his heart was broken when his father was led back to jail. I brought in a verdict for \$5,000 against a bankrupt man, who is absolutely judgment-proof, the verdict not being worth the paper it was written on. That was everything I did. I was paid \$3 a day and served twenty-four days, a total of \$72. There were twelve men on every jury; practically none of the panel did more than I did. So it cost the state just \$900, for jury services alone, to accomplish these three unimportant things, to say nothing of lawyers' fees, judges' and bailiffs' expenses, and all the other outlay. I frequently wonder, since I got back home, if it was worth the price?

Why must twelve "good men and true"—it's a legal phrase I learned in court—be dragged from their work to dispose of matters which the judge alone could dispose of every bit as well, nine times out of ten? The county seat where I served is a city of 100,000 population. It has four law courts and one equity court. In an equity court the judge hears and decides the matters himself; in a law court juries of twelve men decide the facts, under legal instructions from the judge. I noticed that the really big and important cases

were all in the equity court, where one man rules; the minor ones were in the law courts, where thirteen men decide—jurors and judge. Why is this the case?

I can't, for the life of me, figure out why twelve men are needed for a jury. The grand jury, which returns the indictments in criminal courts, consists of only seven men. The juries in the courts of the justice of the peace consist of only six men. They decide cases fully as important as any I heard, where twelve men were used. Why twelve men, instead of six or seven or any other number? I asked

number to six and cut this expense right in two?

Neither can I, for the life of me, see why a verdict should have to be the unanimous decision of all twelve men, except, perhaps,



You swear to tell "the truth, the whole truth and nothing but the truth;" and then some smart lawyer on the other side does his best to prevent you from doing it

If This be Contempt of Court, Send Me the Bill

I WAS recently called as a special juror on a case here in New York. About seventy-five men were called on the case. Out of the seventy-five, twelve were to be selected. That is all right and necessary. But when we seventy-five men gathered—coming distances ranging from a block to ten or fifteen miles in the midst of a busy Monday morning—it was discovered that the attorney for the defense was not in court. He was sent for, and when he appeared it developed that he had not been notified that the case was to be called. He and the judge and the district attorney agreed to an adjournment for a few days—and back we all went to our offices, having wasted from two to three hours apiece. Remember this, however: Each of us will get two dollars for that day's jury duty—although we did nothing. That makes one hundred and fifty dollars, to say nothing of the time of the court and the officers.

A few days later we gathered again—seventy-

five men from all over New York City. Another adjournment. More time wasted. One hundred and fifty dollars more to be given us—for no service—to say nothing of the money value of the time wasted by all concerned.

There was another beautiful little irritation: The clerk who called the roll sat at a desk fully thirty feet from the first row of jurors. He growled because he could not hear us answer our names. Did it occur to him that he might move forward to a position where he could hear better? Of course not. He has the habit of doing things thus and so, and probably nothing could induce him to change. He prefers to sit where he is, shout his own lungs out, and strain his ears.

The whole performance was so silly that it was mildly enjoyable. I think every man in the room was guilty of inward contempt of court.

Taken from "Sid Says"—The American Magazine.

one man, and he said he guessed it was because Christ had twelve disciples. Another man said it had been twelve ever since William the Conqueror subdued England, although I don't know yet just what that had to do with it. But if seven men can return an indictment and six can try a case in many courts, why must twelve "good men and true" be insisted upon to dispose of such minor cases as it was my lot to hear and decide? Jurors where I live are paid \$3 a day. There is no court on Saturday, but they are paid for the day just the same, so they really receive \$18 a week, or \$3.60 a day for each day served. Why not cut down the

where a human life is at stake. Every man who ever walked out of a court-room in charge of a bailiff, and entered a jury-room, there to be locked in until a verdict had been reached, knows full well that two or three men decide most cases, anyway. I never sat in a jury-room in my life but the procedure as the bailiff locked the door was something like this: Somebody cracked a joke as the others hung up their hats or wraps. The fresh-air fiend threw open all the windows, no matter how cold it was. All twelve men tried to crowd into six chairs at the foot of the table. The foreman was no sooner elected than he announced that "we must go about this in a

businesslike manner," and, accordingly, he would hear opinions, in turn, as the men sat about the table. The first four, or perhaps six, expressed their opinions, while the others listened. Then everybody started talking at once. The men who talked the loudest soon impressed their views on the others, and a half-dozen men at the foot of the table never did get anybody to listen to their views, except, perhaps, the men who thought exactly as they did, so that the argument was absolutely fruitless so far as molding or changing any opponent's views was concerned.

I respect the courts, I will serve on the jury again as a matter of duty. I am a law-abiding taxpayer rearing a family. But I do think there is a lot of buncombe about a trial by a jury of "twelve good men and true."

Now, for instance, a witness takes a stand, having been solemnly sworn to "tell the truth, the whole truth, and nothing but the truth." And then some smart lawyer, on one side or the other, puts in all his time preventing the witness from telling "the whole truth." He objects because it is "immaterial, incompetent, and irrelevant;" he objects because it is not "cross-examination," or "gone into thoroughly once before;" he objects because "it is argumentative," or "calling for the opinion and conclusion of the witness," or "leading," or "hearsay," or anything else he can think of. And the judge looks wise and stops the witness from telling the whole truth, which he just took a solemn oath to tell. Why should not everything bearing directly upon the subject at issue be told, no matter which side it might injure? How can a jury determine the exact truth when one of the lawyers is so much better or luckier at "objecting" than the other? I'm only a farmer, not a lawyer, but I'd like to have somebody explain these things to me.

Again, why should not twelve men, just as they come, "mill run," be chosen to sit upon a case, provided only that none are related to any of the parties, have no prejudice, and know nothing about the merits of the controversy in advance? They don't seem to do it that way just now.

For instance, I sat on a case where something like \$25 was at issue. A man had hired a transfer company to move his household goods. They had not definitely decided on the price in advance. When everything had been unloaded, except the piano, the movers demanded their money: \$15. The customer said that was too much; he offered \$10. They argued until finally the moving man drove away, with out any money, taking the piano with him. The customer repeatedly offered \$10, the transfer company repeatedly refused it. Meantime the piano was in storage at the transfer company's warehouse, at \$2.50 a month, for almost a year. The customer brought suit to recover the piano.

Here was the way that case was tried: The law in the State where I live says that sixteen men shall be called into the jury

box (twelve in the regular box and four in chairs placed alongside) and examined by the lawyers on both sides. This case came up Monday morning, when there were no juries working and all the courts were idle, waiting until juries could be called. Sixteen men were called, while sixty-eight others sat in the court-room waiting. It took the lawyer for the plaintiff over an hour to examine the sixteen, asking everything he could think of. Then the lawyer for the defendant went through the same performance, asking all the same questions and a few he had thought of while sitting around. The law permits six more men to be called, to [CONTINUED ON PAGE 23]

Things You Should Know Before You Try Poultry

Statesville Road, Charlotte, N. C.

DEAR SIR: Noting your invitation for letters, in the last number of FARM AND FIRESIDE, I am herewith offering a few suggestions (?).

The wisdom (?) of the average managing editor of a farm paper is "past finding out." I am reminded of my friend, an editor, who invited me to tell him what I had done with an egg farm, which article he edited and passed to the managing editor, who put me down from another State, and where I wrote thousands he wrote hundreds, making what I said an awful mess.

The last number of FARM AND FIRESIDE is very interesting from a literary standpoint, and farmers have to read so much literature that is impracticable, because it is selected and written for literature alone, for the reason that the writers cannot sell it unless it has literary value.

If I know any one job better than another it is horny-handed poultry work, and the last number of FARM AND FIRESIDE makes a special effort at poultry, studiously avoiding everything that tells "the other side" of practical work with hens. "The other side" is the larger side. There are so many people tired of city-high prices, longing for easy (?) life on farms, that such as appears from month to month makes them think they can go out and get fat with a few hens. They can't do it; and you do harm in holding out any such hope, and thereby become the failure you name in the invitation I am coming in on.

The Rogers hen story is the same old story of generalities, taking special pains not to tell what he is making.

I repeat, you cannot sell a story to your class of magazine unless it tells fairy tales. Facts, all, as they are, are not wanted.

That powerful Wolff story from Washington, beautifully written, apparently based on facts; but when you allow a space writer, which he is, to say, "In Poland you can't find a child under seven years alive to-day," you discredit all he says. Common sense tells you starvation does not draw a line at seven years. God knows, the truth is bad enough.

More than once in the past I have "called" the editor of FARM AND FIRESIDE on his one-sided articles, and offered him the other side, but—none of it for the former editor. Not only that, but I have offered him an account of failure by one of the agricultural experiment stations in test work, and he refused that till he had written all the failure out of it.

With such facts before me, I would like to think you mean well, but I am forced to conclude that "the boss" requires literature rather than facts, else you don't know. If this is something you were not looking for, blame it to the broadside invitation. I can make all the riches out of eggs look like "thirty cents," and tell the truth all the way through.

With due respects, I am

Very truly yours, C. W. HUNT.

DEAR MR. HUNT: I wish you would sit down and write me your view of "the other side" of the poultry business.

Nothing is further from our desire than to lure anyone into any branch of farming with false ideas. What we want to do is to make FARM AND FIRESIDE a national publication for the individual farmer. We want him to get something of practical value out of every article in the book. We do not knowingly print anything because of its literary value, except pure fiction, which we label.

If all the statements you make about the contents of FARM AND FIRESIDE for February are true, then we are certainly most grievously at fault. But don't forget that we are just folks up here, human beings just like you are, and that in getting a magazine together errors occasionally are bound to slip through in spite of all we can do to prevent it. If our articles are fundamentally wrong, that certainly is something to kick about. And if our friends, such as yourself, can help us to avoid that we will be duly thankful.

If you are serious in saying that you can't sell a story to FARM AND FIRESIDE unless it tells fairy tales, I must differ from you, because that itself is a fairy

tale. What your experience has been with FARM AND FIRESIDE I do not know, because I have never had anything to do with it until a couple of months ago. I think you will find, as you go along, that FARM AND FIRESIDE will be practical and helpful and truthful, in so far as it is in our power to make it so.

With regard to Mr. Wolff's article, let

records in the case, particularly in this case, you would find that you had exploded a little prematurely.

The truth of the matter is that the Germans were directly responsible for the killing off of these children. They knew that in order to get Poland and other northern territory under their thumb, for the future, it was up to them to kill off the

the children were fed on the farms the farmers were penalized and not infrequently shot, because the Germans said that the fact that they had enough food to feed these children from the cities proved that they were violating the rationing regulations and hoarding food that the Germans should have. I sincerely trust that this will lay the ghost of Mr. Wolff's being a liar.

I am glad you would like to think that we mean well. We do mean well. And we wish you well. And we wish you would let us hear from you further.

Very truly yours, GEORGE MARTIN.

We Wish Others Would Take the Bait Like Hunt Did

NOTHING pleases us more than to have a man of experience write in and tell us we don't know what we are talking about. Especially if he will then sit down and tell us what he knows, from his own practical experience.

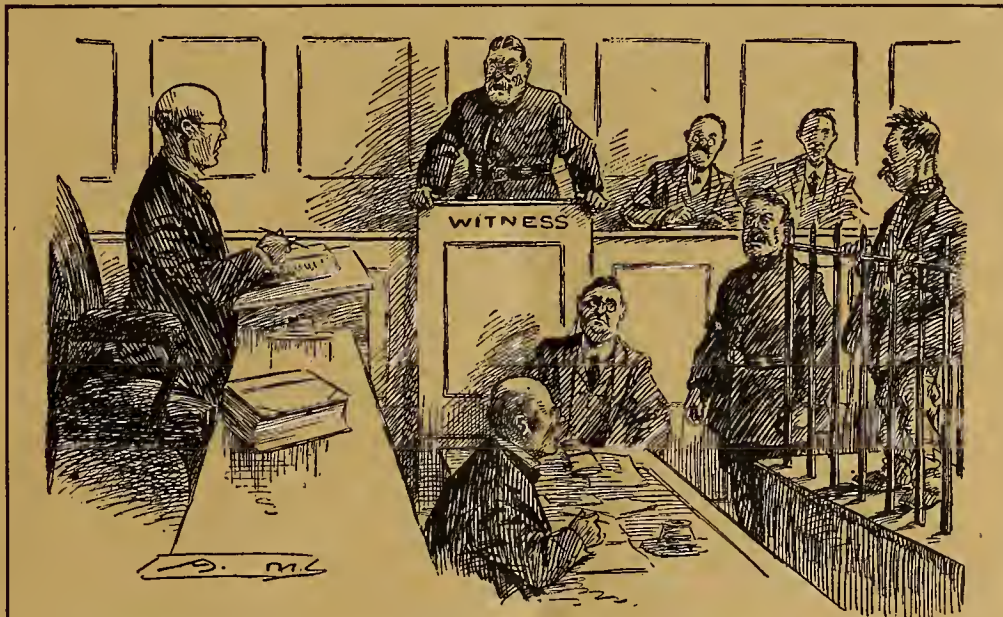
That's the kind of magazine FARM AND FIRESIDE is—a magazine first, last, and all the time for *all* farmers. And, so far as we can prevail on them to take time from their busy lives to give the rest of us the benefit of their experience, FARM AND FIRESIDE is not only written for farmers, but also *by* farmers.

So if you have some valuable information up your sleeve, any knowledge you have dug out of your farm experience that would help some other fellow if you passed it along, for goodness' sake write it to us. It won't do you any good to hoard it, and it will help farming generally to reach the true dignity and splendor and prosperity that rightly belongs to it, if you pass it along. We *do* like to get letters about what you are doing. So don't forget the address: 381 Fourth Avenue, New York City.

THE EDITOR.

me say that your implication that he is a space writer, urgently soliciting commissions from magazines for beautifully written material, is quite a distance from the truth. I went to Wolff myself, and asked him to write this article. And he did it for a good deal less than half what he usually gets for a magazine article, because he believed the information in his posses-

growing crop of citizens. This they systematically did. You also know, from your experience with young stock and young plants, that in the earlier period of their lives they are less robust and able to withstand privations than at any other time. That is the reason in the case of the Polish children that they died off more completely and rapidly than the



MAGISTRATE—But what were you doing to allow a man of the prisoner's physique to give you a black eye?

CONSTABLE — On the morning of Toosday, the first of April, your worship, I was on dooty outside the "Dook of Wellington" public 'ouse, when, at the instigation of the prisoner, my attention was drawn to somethin' that wasn't there. 'E then 'it me.

From Punch.

sion ought to be gotten to American farmers. I think he did a remarkably good job, and yours is the first letter characterizing it as anything else.

With regard to your rather bald statement that he told what wasn't true to sell his story when he said that "in Poland you cannot find a child under seven years alive to-day," I feel that you did both Wolff and ourselves an entirely unnecessary injustice. The statement about the children was not Mr. Wolff's statement, nor was it my statement. It was the statement originally of government authorities who had investigated personally the situation in Poland. There is every reason to believe that they spoke the truth. And if you would take the trouble, before calling a man a liar, to look up the official

older residents. When you couple with that the fact that the Germans very rigidly rationed the people of Poland and imposed severe punishments, sometimes not short of death, for the hoarding of foods above the ration authorized by the German invaders, you may get some additional light on the situation. The fact of the matter is that the German invaders were appealed to by the people of Poland in the towns and cities to let them send their children to farmers in the country because the children could not get the right food to keep them alive in the cities. The Germans said that was all right, and they appealed to the farmers to take these children and keep them on the farms. Many, many thousands of them were taken by farmers. And when

BEGINNING on a city garden lot, 50x50 feet, with a wooden shed for a hatchery, in the spring of 1910, I had by the fall of 1912—three seasons—reared 100 mature Leghorn hens and 200 pullets, and had \$250 in chicken money, in spite of the plague of white diarrhoea, which in the second year took a toll of more than a thousand chicks for self and others I had a contract to raise them for. Even while I had lost such a quantity, and knew it was a hard fight, I was determined to make it go, and in the fall of the third season bought a country place, built laying houses 10x50 feet, incubator cellar, garage and dwelling, bought more modern hatching material, launching straight into egg-farming and selling Leghorn baby chicks to the trade, figuring that in the open country, with a good cellar, a new place, and plenty of room, the chicks would not die and the hens lay well into late summer and fall.

The early spring of 1913 found things going at a lively gait; but out of the 2,500 baby chicks put into hovers (standard make) I came to September with barely 500 pullets, many worthless, white diarrhoea having hit me worse than when in town; for I buried them as high as fifty a day. But, not being a quitter, I stuck to the job, selling as high as 2,000 baby chicks a season, and a standing order for most of my eggs at 30 cents a dozen the year round, while paying around \$2 per 100 for feed, using standard brands of scratch. I found all my surplus eggs had to be sold at market, in competition with eggs of all sorts, which still holds good with all egg farmers.

By 1915 I had reared 750 hens, most of them pullets, in which year I gathered in round numbers 54,000 eggs, 35,000 of which were laid by June. This was my largest year, and was the deciding season as to the future. The best day was 375 eggs, and the worst was 12 eggs, out of 750 hens, well fed, well cared for. The accompanying table is easily understood and will give any would-be egg farmer an idea of what to [CONTINUED ON PAGE 43]



Photo by Clarence A. Purchase

EVEN the winds disturb not, as they go,
The boughs of those long larches, bending low
Where the marsh-water lies,
In which Its vacant eyes

Gaze at themselves unceasing, stubbornly,—
Only sometimes, as on their way they move,
The noiseless shadows of the clouds above,
Or some great bird's hovering flight on high.

Eméle Verhæren.

What I Have Learned from Six Years as a Sagebrush Settler

By William David Ball

H E CAME to my house one evening, this friend of mine, and showed me the prospectus of an irrigation project in southern Idaho. The land-drawing was to take place at Twin Falls, Idaho, in about a week. Eighty thousand acres of virgin soil were to be thrown open under the Carey Act—divided among the lucky payers of first installments.

The prospectus was illustrated in glowing colors, but it had nothing on the word-painting of my friend. This new country, he said, was the promised land of the chosen people; it was the ideal spot on God's green earth. (My friend was a preacher.) The climate had been imported straight from the Garden of Eden; the soil was fertile as that of the far-famed field of Hebron; and the water welled forth with the same gorgeous abundance that marked the gushing of waters in the desert of Zin when Moses smote the rock with his rod.

He conjured up to my excited fancy misty seas of golden-headed grain; rolling meadow lands dotted with sleek, contented cattle, and harvest fields thickly lined with row on row of bulging sacks—bulging with potatoes, eight pounds for twenty-five cents. It got me.

My friend intended to file on a 160-acre farm for himself at the drawing. I commissioned him—for \$50—to pick out a 40-acre farm for me. He promised to use the same care in selecting my forty that he used in selecting his own hundred and sixty.

Nine months later I landed in the country of sagebrush and lava with \$210 cash, a heterogeneous collection of farm implements, and two horses that I called a team. I hired two men for a day to help me move my carload of goods.

The Twin Falls tract, a flourishing project eight years old, extended four miles south of the city of Twin Falls to the high-line canal. I stood on the bridge over this canal and looked southward over the much-advertised new Salmon tract. Somewhere, hidden in this trackless waste, lay the 40 acres filed on for me by my friend. We plunged into the brush. Along toward evening, with the help of several maps and the section posts, we finally located my farm.

It didn't look much like a farm to me. For miles, on every side, sagebrush covered the ground like a miniature forest. Two miles to the south rose the first foothills—also covered with sagebrush. Around me the plains stretched, long, rolling swells of gray-green tinged with purple. We cleared a space with a grubbing hoe, and camped.

The horses were thirsty. I had brought two whisky barrels with me, and before supper I drove to Cottonwood Creek and filled the barrels. I should have to do this once a day, it seemed, until I built a cistern. But before I built the cistern I should have to go to Hollister for a headgate, install the headgate, and build to my place a long, dry mile of ditch. These were things the man who wrote the prospectus had forgotten to mention.

The first pressing business was to transfer five tons of hay I bought from a farmer near the high-line canal. Finished with the hay, I hauled lumber for a house and barn.

I was sitting on one of the rafters of my "shack" one morning, vainly trying to recall some rule in calculus that applied to

the cutting of 2x4's. On the hill, up near our canal, I could see the black glint of tar paper on the new house that had gone up the month before; and to the east, a quarter of a mile away, my nearest neighbor was just measuring the foundation for his house.

Down my new trail came a stoop-shouldered, wizened figure of a man. His wide-

"Paying basis—huh! Trips East!" he cackled, and turned on his heel.

Very plainly I heard him mutter to himself as he slouched away: "They commonly last a year. I give this one six months."

Crusty old beggar, I thought, with not any too much brain. But as the morning wore on his words began to trouble me.

place. I even brought a contractor to look over the job.

"Too many rocks!" he stated.

I protested: "Those rocks aren't bad."

"Try them!" he grunted.

I had noticed, in the East, substantial and rather picturesque walls and fences made of rocks. That was all I knew of rocks on a farm. By the time I had that first acre ready to plant I knew more.

I first used a pick and crowbar on the boulders sticking out of the ground. I hauled the smaller ones off in the wagon, the larger ones on a sled or stone boat. The field looked rather presentable—before I plowed it. It took me four days to plow that acre. Then I gathered rocks again. After the harrow I gathered more rocks. Each piece of machinery I put on the ground brought up other rocks—at least I think they were not the same ones. The place, in fact, was simply an everlasting rock quarry, and the vein extended pretty well throughout the forty.

I had occasion one day to walk across country to a neighbor's. On my way I crossed the 160 acres belonging to my friend the preacher. The land, which he was holding for speculation, was still in brush. I was interested in the fact that I saw no rocks on his land. I recrossed the hundred and sixty. I went over it thoroughly. Not a rock could I find. I had something to think about on the way home.

The next day the company watermaster rode up to my place, and, during his stay, commented on my growing rock pile.

"I paid a man to file on a forty for me," I complained, "and this is what I got."

"Too bad," he replied with a shrug. "But you're not the only one. About a third of the settlers on this tract are farmers; the other two thirds are dentists, teachers, clerks, and laborers. Most of 'em paid someone to file for them, and not six are satisfied with what they got. Picking your farm is an important part of the business of farming, and to let someone else do it for you is a mighty poor beginning, young man."

I agreed with him. Yes, I agreed heartily.

When I finished leveling my acre of ground it was too late in the season to plant anything but potatoes; so potatoes went in. The run of irrigation water that first summer was a pitiful thing. It consisted of one run of three weeks, and the amount of water was enough to irrigate about four acres in every forty. Potatoes, I found, were usually irrigated three times. Mine had one good wetting.

I worked with a threshing crew that fall, and earned \$75, nearly all of which went for hay. It was astonishing how much those horses of mine ate. I resolved to put in a good-sized patch of alfalfa the next spring. Everyone had been planting alfalfa around Twin Falls for the past eight years. It seemed to be a fashion.

My potato crop was twenty sacks—pretty small potatoes. But I ought not say anything against those potatoes. They fed me through the winter—potatoes, jack rabbits, and a little flour and bacon. My plans for the year had fallen short. I had ten acres of brush burned instead of the whole forty; I had two acres of rock cleared instead of twenty. That was bad—very bad. Next year must be better.

As spring drew near I was appalled to find my money [CONTINUED ON PAGE 40]



Samples of the three best crops we raised in the sagebrush country

You Can't Pour Cream Out of an Empty Pitcher

THERE is no denying that you and I and every other man get out of life just what we put into it—and no more. That is the law of compensation. It never fails. If you don't put knowledge and experience into your head, you can't get knowledge and experience out of it. A cream pitcher is a cream pitcher, but if you don't put cream into it you can't pour cream out of it. A man's brain is a man's brain, but if he doesn't put anything into it he won't get anything out of it.

You can't get something out of anything that you don't first put something into. This is true of your farm, too, just as it was of Ball's farm, and of every other farm. You get out of it what you put into it. If you put hopelessness and carelessness and shiftlessness into it, you'll reap failure and a ramshackle and run-down farm. If you put work and hope and care and *thought* into your farm, you'll reap success, just as Ball did. If human experience proves anything, it proves that. **THE EDITOR.**

brimmed, ragged hat flopped comically about his face as he slouched along; in the crook of his arm he carried a long-barreled shotgun, and at his heels trotted a mongrel dog.

I suspected he was an old settler, Otto Travers by name, of whom I had heard. He had lived on the banks of McCullom Creek for the past twenty years. I could, doubtless, get much valuable information from him.

He stopped and squinted up at me curiously. His eyes were pale blue in color, and his stare was singularly direct and searching.

"You're one of them new settlers, huh?" he questioned. "Come from the city, too?"

"Yes, I've been here about two weeks," I replied.

"How long do you s'pose you can stick it out?"

I was startled. I had regarded my new undertaking very seriously, and here was this little old man looking at me with his cocksure eyes and taking it for granted I was going to fail.

"Why," I finally managed to answer, "I intend to make my home here for good."

Of course, after a year or so, after I get my farm on a paying basis, I'll probably take trips East during the winter."

Others, it seemed, had failed. Even in the few days I had been on my farm I could see that my dreams were somewhat rosy and my plans rather vague. If I did not wish to be like these others I should have to state my aims clearly, make some definite schedule, and then strictly adhere to it.

This is the schedule I drew up, sitting on a boulder in that rank sagebrush waste:

At the end of the first year I would have my place cleared of brush, and the rocks half off. At the end of the second year I would have my place fenced, twenty acres in alfalfa, and all the rocks cleared. The first two years I would spend every cent I made on improvements, but at the end of the third year my profits would pay up the water contract on the land—some \$1,500 with interest. The fourth year would be easy money.

I began on the first year.

I had always regarded farming as hard work. I was right. But I had also looked upon it as an occupation that anyone with ordinary intelligence, whether he knew anything about it or not, could take up successfully. I don't think I have yet quite realized how wrong I was.

I grubbed an acre of brush from the forty by hand. It was back-breaking work. I did want to hire a steel grubber to clear the

An Appreciation of Joe Wing, Whose Last Unpublished Manuscripts Are to Appear in Farm and Fireside Beginning with the July Issue

DEAR READER: When Joseph E. Wing died in 1915 he left in my care a number of unpublished manuscripts which he believed to contain some of the most inspiring things he had written. Those who knew Joe Wing personally, or knew him through his writings or lectures, need not be told what that means. The Crowell Publishing Company has obtained permission from the Wing estate to publish these manuscripts in FARM AND FIRESIDE before they are printed in book form. The first article will appear in the July issue.

I do not desire to recount here the interesting record of his accomplishments. It is as thrilling as any romance to read of his hardships and difficulties encountered in establishing alfalfa on his home farm in Ohio, and of his final success; of the nickname "Alfalfa Joe," born of scorn; which in later years became one of endearment. I could not, if I tried, put an estimate on the value of his work for better live stock, better crops and soils, better living conditions on the farm, and better education for farm boys and girls. More able pens than mine have done that since he died, and will do it again and again in the years to come.

But I do want to tell what Joe Wing meant as a friend and a neighbor. I was born and raised in Joe Wing's community in Central Ohio, and among my earliest memories is one of the first time I walked over to Woodland Farm. It was a June day that I, a tow-haired, barefoot lad of five or six, slipped away from home, trudged down the dusty road, limped painstakingly across the alfalfa stubble, and came at last to what then seemed the outer boundaries of the world. I peeked through a lattice work of twigs in the osage-hedge fence. In the enclosure was a well-kept lawn dotted here and there with massive oak trees, and at one side a cottage partly covered with vines. Under one of the trees two little chaps were trying to put on the obstinate wheel of a red express wagon. How long I watched them, almost breathlessly, I do not know, for my attention was suddenly arrested by a huge hand being placed on my shoulder. My first instinct was to flee from the tall, ungainly figure at my side, but as I gazed hesitantly into his face the smile that quirked the corners of his mouth and the kindly light in his gray eyes told me that here was a man that any child could trust.

"Andy and David need some help on that wagon, don't they?" he asked, stooping down beside me.

I nodded.

"All right," he added, "let's go over and see what we can do."

Hand in hand we walked through the gateway, and as we turned up the path he said:

"Why, you haven't told me your name. What is it?"

"It's Trell," I answered gravely.

"Oh, so it is; so it is!" he chuckled. "And do you know mine?"

I shook my head.

"Well, I'm just old Joe Wing, and that alfalfa field I watched you crossing is mine, and those two boys over there are mine, and that little house is mine, and that sweet-faced lady standing in the doorway is my wife."

Thus did I first meet Joe Wing. As I grew older my trips to Woodland Farm became more frequent, and our friendship ripened into comradeship. Mr. Wing was always very busy, but he was never so engrossed that he couldn't give some of his time to the boys. Many times he helped us build mill wheels for the dam across the little creek that flowed through the woodland pasture; again he would take us in the boat to gather lilies from the pond; on other occasions we took walks about the farm or across country. These walks were very interesting, for always he related charming stories about plant and animal life; and, as he later told me, he always placed obstacles in our path—obstacles that we were required to go over or through but never around!

Well do I remember the skating parties on Wing's pond, for there was always a treat in store for us when we went up to the house to get warm. Invariably we were served apples and popcorn as we sat around the crackling fire, and as the wood burned to embers we always prevailed upon Mr. Wing to tell stories. And what stories they were! Sometimes they were of his earlier life on a ranch in the West; again, maybe of the sea or of rural England and France; and sometimes of the people in our own neighborhood. But, whatever the subject, they were live, virile stories about real people and things.

Joe Wing had the good of his home community at heart. The talks he gave at the high school, at the little church, and in the town

hall were always helpful because they were critical and human. And that seed which he sowed is now bearing fruit, for plans are being made for a fine community house with an auditorium, gymnasium, shower baths, rest-rooms, and meeting places for the various farmer organizations. Moreover, his own township and county have been organized by the farmers, and they are members of the State Farm Bureau, and are working toward a national organization. Mr. Wing left able lieutenants to work out and develop the plans, but Joe Wing sowed the seed!

That "a prophet is not without honor, save in his own country," did not apply to Joe Wing. On the day of his funeral, when noted men from all parts of the country came to pay tribute at his bier, those who knew him best closed their places of business, while all of the school children from town and country lined the streets through which the cortège passed.

When in college, I received much helpful advice from Joe Wing, and it was through him that I was influenced to devote my life to farming and farm writing and editing. In one of the valued letters I have from him he said:

"In this round, wiggling old world of ours we must find some way to help the boys, mustn't we?"

Joe Wing's life was truly devoted to the service of others.

The last time I saw Mr. Wing was about three weeks before his death. He was seated in a reclining chair on his porch at Woodland Farm, and as I turned up the path he arose to greet me. It went to my heart to see the frail body, the white hands, and the drawn features of his face. But in his eye was the fire of old. For some time we chatted over old times, and presently he suggested that we walk through the woodland to the alfalfa field. We made slow progress, for he was forced to rest several times, and when at last we came to the large field that lay green in the August drought

we both sat down. There he falteringly retold the story of his struggle to establish alfalfa on Woodland Farm. With a wave of his hand, he concluded: "Those broad acres, my friend, are the realization of that dream." He was silent a moment and then added: "Never, never forget that dreams are the souls of concrete things."

For some time we sat in silence, watching the heat waves dancing over the field, and then turning to me he said:

"You know, Trell, it seems almost unfair that I should have to give up my work now. Why, boy, I'm just at the time of life that my experience should be of some value to this old world."

"But you're not going to die!" I cried.

He smiled at me in a way that a father would smile at a rash statement of his little son, but he did not say any more.

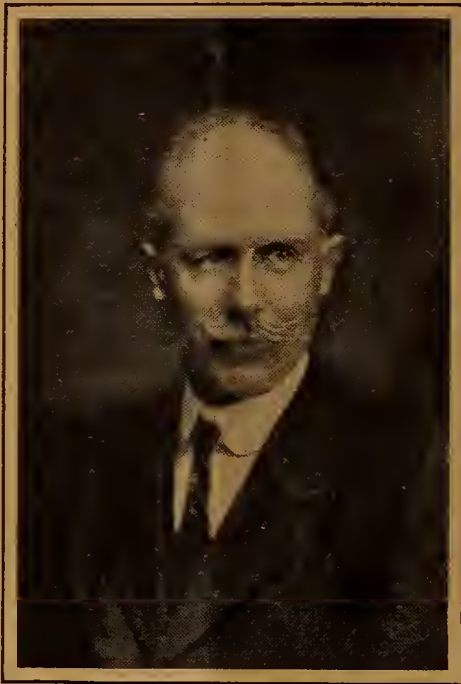
We walked slowly back to the house, and before I departed he placed in my hands for safekeeping his unpublished manuscripts. As I arose to go he took both of my hands in his, and, looking deep into my eyes, he said, very slowly: "I shall see you again, boy, some day!"

A few weeks later a slip of paper was placed on my desk which contained the words, "Joe Wing is dead." No longer did I hear the clicking of typewriters nor the murmur of voices; no longer did the roar of traffic from a busy city's street reach my ears. I was at Woodland Farm—and my neighbor, teacher and friend was no more. I bowed my head on my desk and wept like a little boy. That night I went to the country, and under the stars I struggled with the grief that tugged at my heartstrings. The injustice of it all seemed to overwhelm me, but later came calmer moments, and I returned home reconciled, as I knew Joe Wing would want me to be. When I reached home I read from one of his unpublished manuscripts this paragraph:

"Only on the little foothills have I trod, and always afar off, more than half-hidden by the clouds, has been the summit. But now and then, lifting above them, I have seen glimpses of a shining peak, glorious in the light, beckoning to me as though to say, 'Press on, if you have courage! Some day, if you are strong and faint not, you may stand upon the utmost height, and all the glory of God shall be revealed to you.'"

And then I knew that the utmost height had been reached, and that the glory of God had been revealed to Joe Wing.

He was an inspiration to me. He was an inspiration to the thousands who read what he wrote as correspondent of "The Breeders' Gazette." He was an inspiration to everyone with whom he came in contact, and I know that the wonderful articles of his which it is to be our privilege to publish in FARM AND FIRESIDE will be an inspiration and a help to you, and to all who read them. TRELL W. YOCUM.



"Alfalfa Joe"

TIRE CONSERVATION
COURSE

LESSON 3

Series of Six

*Gaining Mileage by
Proper Inflation*GOOD YEAR
AKRON

Gaining 6,300 Miles

By Proper Inflation

LONG before they had delivered the mileages every one expects from Goodyears, two tires on a heavy eight-cylinder car blew out. The car-owner, Mr. Ralph Booth, took them to a Goodyear Service Station near his office, on West 27th Street, New York. The Service Station Dealer examined them, asked Mr. Booth to what pressures they had been inflated, and then proved that according to the inflation charts the tires should have carried at least fifteen pounds more air. Mr. Booth wasn't quite convinced, but he put on two new Goodyears and kept them properly inflated. These tires have already given 6,300 MORE miles than the under-inflated ones and look good for as many more. Ask your Goodyear Service Station, or write to Akron, for Lesson 3 of the Goodyear Conservation Course—telling how to gain mileage by proper inflation.

UNDERINFLATION shortens by thousands of miles the life of the best of tires.

Without proper air support the tire walls have to bend and flex sharply and constantly.

The extreme bending and flexing of side-walls without sufficient air-support generates excessive heat at the flexing points.

This heat acts on the rubber in and between the plies, making it lifeless and brittle.

The plies separate on the shoulder of the tire, and from chafing against each other soon lose their strength.

Then the inner plies, which are most quickly affected, are fractured—the tube is pinched between the rough

edges of the break, and a blow-out follows.

◇ ◇ ◇

IN certain cases, however, where the damage is not too great and the weakened fabric carcass has not actually broken, Goodyear Service Station Dealers find that by applying a Goodyear Reliner the tire can be made to deliver a thousand and more additional miles.

But consistent attention to proper inflation would save many thousands—at no expense whatever.

Find out just what pressures your tires should carry by asking your Goodyear Service Station—or by sending to Akron—for Lesson 3 of the Goodyear Conservation Course.

The Goodyear Tire & Rubber Co., Akron, O.

GOOD YEAR

AKRON

TIRE SAVERS



A Tire With Fabric Fractures, Due to Under-Inflation.

Ask your Goodyear Service Station, or us, for Lesson 3 of the Goodyear Conservation Course—dealing with tire inflation.

Goodyear Reliner and Goodyear Patching Cement for Restoring Tires Weakened by Being Under-Inflated.



It Certainly Paid Him to Stop and Think

By H. E. C. Bryant (District of Columbia)

BOB MILLER BRYANT of Rocky Point, Pender County, North Carolina, has a drove of beautiful red hogs. He also has four pretty little red-haired girls, and his own hair is almost crimson.

"The red hog has proved a blessing to me and my family," said Mr. Bryant to the representative of FARM AND FIRESIDE. "Once when it seemed that all other friends had deserted me a lone sow and some hard thinking led me out of a wilderness of debt and brought me success."

"Twelve years ago, when I began life in earnest, I bought a small farm in Mecklenburg County, where cotton was king. Everybody about me grew cotton, almost to the exclusion of everything else. Some of my neighbors bought corn and meat and flour to feed their stock and workmen. It was easy to follow the same rut. I soon found myself doing what others of that neighborhood had been doing for decades. It was an up-hill road. Having purchased my land and horses on credit, I was bound tight by mortgages and other obligations."

"The first year and the second passed without any dent in the debt. I took stock, and discovered that I was poorer than when I started. My creditors began to close in on me, and it looked as if all were lost. At one time I thought of running away, going West, far from where I was known, to make a new start. But one day a calculating, businesslike friend went over my affairs with me."

"Is there one bright spot in your farming experience? Have you made a profit off

anything?" he asked.

"Those questions caused me to stop and think. My cotton had cost me more than I could sell it for. My corn was produced at too great an expense. Finally, after going over the results, I said: 'I have one old sow that made me \$200. That is the one saving result.'"

"Well," said my friend seriously, "it looks to me as if you needed more sows."

"From that day on I have been beating my debtors and gaining ground. My drove of hogs increased from one profitable sow to many. Not long ago I sold Lady Gray, a fine hog of the best blood, for \$1,000. I have sold others for \$650 a piece, and still others for less."

"After that amiable friend of mine said that I needed more sows I played up the hog and played down cotton. I pulled my coat off, rolled up my sleeves, and went to hard work. Day and night I was with my hogs. I specialized on one breed, and have won a reputation for producing good stock."

"I have found from experience that it is better—more profitable—to have one brood sow that is actually worth \$1,000 than to have many that are worth only



Bob Bryant

\$50 apiece. Lady Gray has been worth more in dollars and cents than any ten sows we have had. We have five of her pigs that are worth \$2,000, and we do not want to sell them. She will soon be nine years old, and farrowed 16 pigs the last time. She has never produced a common pig."

"The last four or five years have taught me that it pays to have the very best blood if you are going to get good results. Hard work, applica-

tion to the main task, and a desire for the next thing to perfection has helped me keep ahead of the game."

Mr. Bryant lifted mortgages with his faithful sow. He is educating his daughters with money from hogs. From a poverty-stricken, debt-ridden, ordinary toiler he has become a thrifty, progressive farmer, with original ideas and bright prospects. He talks well, writes well on hog-growing, and is a favorite at hog shows. He attributes his success to that dear old hog that kept him from being a bankrupt.

Mr. Bryant has done more for his neighbors than for himself. He stocked Mecklenburg County, North Carolina, with fine hogs. He encouraged hog-farming. Last year he handled more than 1,000 hogs.

All of which merely goes to show that there is usually a way out of the rut for every man who will work hard enough to find it.

Practical Co-operation

WE WERE five neighboring farmers who, despairing and under the burden of the ever-increasing cost of living, decided that by securing our food supplies in quantities, paying cash, getting a discount, taking our own turns at hauling from town and distributing them, we would at least not have to live "from hand to mouth," but possibly might also save some money.

We averaged about \$25 a month in staple foods, and as a try-out each of us contributed that amount to invest in flour, coffee, cereals, sugar, canned goods, etc.

We made out our list. To get the best prices we must buy unbroken packages—flour by the barrel, soap by the box, canned goods, crackers, etc., by the case.

Wholesalers will not sell consumers direct, hence we named our combination "Economy Grocery Company."

We watched advertisements in farming papers and dailies, and sent for catalogues. Sometimes in our home town we found we could get good quotations on supplies for our company at a discount for cash. We have saved at least 30 per cent on groceries and other supplies.

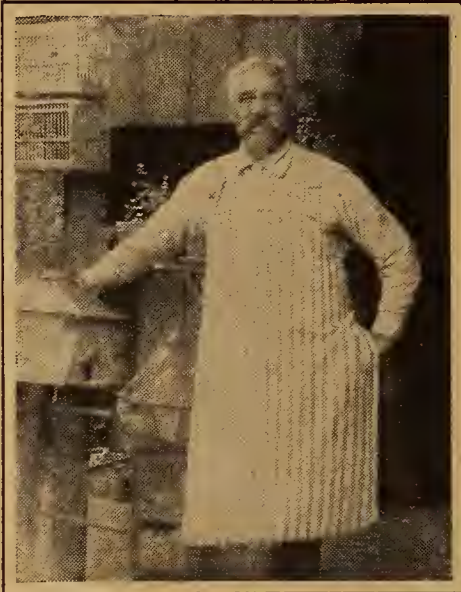
Each of us also has preserved three cases of eggs (90 dozen) in water glass, and now when they are scarce and prices high we have plenty of eggs. L. B. KILMER.

Money Isn't Everything to Him

By Charles Alma Byers

HE, THIS "bird-house man," is, first of all, a philosopher. "It isn't so much what you do," he says, "but how you do it, that counts. Do something well and you'll be successful, and choose a work you like and you'll be happy too. If you can't make a sort of hobby of your work you'd better find your hobby and make it your work."

And Gus A. Baumann, philosopher and "bird-house man," practices his own philosophy. Some years ago he was a half-owning partner in a firm in Chicago. The house made money, but Mr. Baumann had a hobby "on the side." To-day, to appease his love for that hobby, for he long ago gave up his former business, he maintains an humble little workshop, with which is also combined his home, on a much traveled motorists' thoroughfare in an outlying portion of Los Angeles, California. Nearly sixty-five, he



The "bird-house" man

is strong, healthy, and happy, and would rarely have his age guessed at more than fifty. "I know I am still young," is the way he puts it, "because I feel young, and I feel young because I find contentment in my work." That, you see, is his philosophy—at least, a part of it.

Mr. Baumann is well called the "bird-house man." He builds and sells bird houses of all sizes and styles, and for use either on the farmer's unpainted barn or in the imposing garden of some wealthy man's city or suburban estate. Some of the houses are small, single-nest affairs, which require only an hour or two to build, and which he sells for a few cents each; others are large and of complicated construction, requiring days of labor, and selling at very fancy prices. He always has a large stock and assortment on hand for the prospective patron to choose from, but if something special is desired he works out a rough sketch of it, according to the

patron's suggestions, and builds it "to order"—probably to conform to some certain architectural scheme.

It is perhaps but natural that a bird-house man should also make bird cages. Mr. Baumann does, and his cages are likewise of nearly every conceivable size, style, and kind—plain and ornate parlor cages, ingeniously designed breeding cages, large out-door aviaries, and so forth. In fact, he is prepared to meet every need of this kind, and in all his work, as an architect for birds, he puts something of the artist, and frequently something of the inventor as well. He loves birds, and he likes to know that those used to captivity are well cared for. Hence, aside from providing his cages with every bird convenience, he designs them so that they may be kept clean with the least work possible.

Mr. Baumann is also a bird authority, particularly on the subject of their diseases. He is a member of the Canary Breeders' Association, and is always glad to give information on all matters pertaining to bird breeding and bird care. In connection with his bird-house and bird-cage business he breeds a few canaries for the market, but he makes no pretense of running a bird store. He is a bird-house builder by trade, or profession, and it is therein that his chief interest centers. It was once his hobby, but it is now his business.

And he is making money—not a fortune, but a comfortable living. At least, he has made his work a success, and, above all, a pleasure.

"You can do big things in a little field," he philosophically declares, "or little things in a big field. Some people do less than either. The important thing is: Make a success of what you undertake, and first choose a work out of which you can get enjoyment and contentment as you go along."

Over Sixty—But She Made a Fortune

By Bertha H. Smith

FREDA EHMANN was on the last lap of the three score and ten when her son came in one day and threw some ripe olives into her lap and asked her why she didn't try to pickle them. They were from a grove this son had deeded to her in return for some money she had given him when he was caught in the squeeze of the panic of 1893. His lawyers had advised him to go into bankruptcy, but his mother told him that was not her idea of honor, and gave him all the money she had, taking in return a deed to a 20-acre olive orchard not yet in bearing. The olives thrown in her lap were from the first crop.

"Pickles ripe olives? How can I? These are the first I've ever seen," was Mrs. Ehmann's answer to her son.

And after a sleepless night she went to Professor Hilgard of the Agricultural College of the University of California, got a recipe for ripe olives, had some casks

put on the back porch of her daughter's home, and from five in the morning till late at night, and at intervals through the night, she hovered over those casks as if they were cradles full of sick babies, until she had some pickled olives. And they looked so ugly and mottled that she was ashamed to show them to Professor Hilgard, and made her daughter do it. He pronounced them the best he had ever seen, and so did the leading grocer of Oakland, who ordered all that were in the casks and paid enough for them to pay freight on the entire crop from the ranch to Oakland. This crop, though small, kept Mrs. Ehmann at those pickling casks for many weeks.

With samples of the winter's work Mrs. Ehmann set out to New York, where every dealer held his nose at the mention of ripe olives, remembering the barrels of them that had been hauled down back alleys at dead of night and dumped in East River, for the pickling of ripe olives had not been

reduced to a science in the middle 'nineties. But in Philadelphia and elsewhere she got orders for about 15,000 gallons, and went back to California wondering where the olives were coming from. She leased another orchard with a pickling plant and twenty-seven Chinamen, and before the next season was over she was threatened with lawsuits because she could not fill orders.

This candidate for the chimney corner established a market for one of California's exclusive products, for other dealers immediately got a chance at the orders she could not fill. By the second year the business was too big for one head and one pair of hands, so Mrs. Ehmann's son and son-in-law joined her in the business, which developed into oil-making as well as pickling. Leantos and additions were built from year to year as the business grew, until about seven years ago, when a clean sweep was

made of the old plant and an entire new plant was built at Oroville, on the ground first leased and later bought by Mrs. Ehmann. The company was capitalized at \$100,000, with Mrs. Ehmann as president. It now owns orchards conservatively estimated at \$500,000.

Though nearing eighty, Mrs. Ehmann spends every day from November to May at the plant, and only a few years ago yielded to her son's persuasion and started the day at seven instead of six o'clock. She takes no time off for Thanksgiving or Christmas, except possibly a Christmas dinner if the family gets together at Oroville; but at the close of the pickling season in May she goes to her daughter's in Oakland and has time for other things.

During the pickling season she goes all day from vat to vat in the great pickling-room, cold and dark and damp, splashing about in overshoes on a wet floor in a temperature that makes visitors wonder.



The ripe-olive queen

If You're Not Making Enough Money

[CONTINUED FROM PAGE 11]

advantage of the best types of machinery. On the smaller farms, either the machinery and stock were inadequate, or the interest and wear and tear ate up most of the profit from them.

Possibly the farm of, say, 100 acres, can be made to pay at the prices we expect after the war, especially if we can get enough of the spirit of co-operation to work together in the purchase of the most expensive machinery and good breeding stock. Co-operation would help to meet the problem of hired labor, too. We can never expect to have farmhands enough to go around, one to each farm, and yet every farmer sometimes needs help badly. We may have to go over to the plan of planting the farmhands on little farms of their own, with a certain amount of day's labor assured by the farmers around. That plan works well in some Australian communities.

But with all due allowance for the possibility of co-operation and of a higher price level, the fact remains that the farm which is to pay must represent a considerable acreage and capital. Between \$10,000 and \$15,000 invested in land, improvements, stock, and machinery appears to be requisite to the kind of success an intelligent farmer deserves, according to the careful calculations given by Professor Warren in his excellent book on Farm Management.

Most men in farming have had to do with less, but here is a point which indicates that their situation is unsatisfactory: The sons of farmers with that minimum or more remain at home to work on the place, or set about getting farms of their own. The sons of farmers who have to worry along with few acres and small capital leave home, and a very large proportion abandon farming altogether. If a man's condition doesn't appeal to his sons, there is something radically wrong with it. And that is the case with our smaller farms.

What can be done about it if a great proportion of our farms are below the standard, and incapable of yielding a standard living? The first thing to do is to face the facts. Not every farmer can increase his acreage by leasing or buying adjacent land, but many could and would if they kept accounts and came to realize how essential adequate acreage is to anything like decent financial success.

Young men who are thinking of buying farms ought to consider seriously whether they are sinking their fortunes in an equipment out of which they can never hope to make a satisfactory living. Better lease a farm of proper size than own one too small for success. The money that would be sunk in such a small farm is more productive when put out at interest.

One of the principal reasons why men put up with the small farm, or the farm inadequately improved, is that they have only a small amount of money of their own and cannot borrow or dare not borrow the additional sums necessary to command a good farm. The old system of farm loans in America was a terrible handicap. The interest rate was high, especially if bonuses are taken into account, and the term of repayment short, with a chance of foreclosure at the end.

In European countries farmers have been able to get loans at low rates of interest, repayable at any time in thirty, forty, or fifty years. We have the beginning of such a system in our federal farm loan banks. But it remains for the farmers to make up their minds to dominate it, and use it to bring about the establishment of standard farms, where industrious men can build up their prosperity without handicaps. How? Don't let the farm loan system be used to supply loans for big landed estates or for the little farms where a man can't make a living, but for farms which, in the best opinion of the agricultural community, offer a chance of success.

It is of primary concern to the farmers that the condition of their occupation should be good enough to hold a fair proportion of their sons in the country. But it is of still more vital concern to the nation. So long as the farmers of a country are prosperous and contented, it is safe to forecast an orderly social and political development. When the farmers find conditions intolerable, nothing in the State is secure. Look at Russia, Austria-Hungary, Rumania. They are living in anarchy now, and a chief reason for it is the fact that their agricultural population has remained impoverished and enslaved.

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Why I Think We Are Going to Have Better Fertilizers Now

[CONTINUED FROM PAGE 7]

The new standard analyses consist of four groups, as follows:

GROUP I—Staple and Fodder Crops: Fall-sown wheat and rye, oats, barley, millet, corn for grain, corn for silage, grass for seeding, clover for seeding, and buckwheat. The analysis recommended for all of these is the same. In addition to these there are top-dressings for wheat and rye, timothy or meadows, clover and alfalfa, and permanent pastures.

GROUP II—Vegetables: This contains one formula for cabbage, brussels sprouts, turnips, and rutabagas; one for cannery tomatoes; one for sweet corn, beets, sugar beets, mangels, carrots, parsnips, and late potatoes; one for cucumbers, melons, squash, and other vine crops; different formulas for field onions, spinach and asparagus, lettuce, celery, truck crop onions and truck crop tomatoes; one for market garden peas and beans; and one for field beans, field peas, and extra early truck crops.

GROUP III—Fruits: Strawberries, apples, peaches, currants, gooseberries, blackberries, and raspberries are provided for in seven different analyses.

GROUP IV—Special Analyses: This covers certain local requirements where a standard practice in fertilizing special crops has come to exist, such as for early potatoes on the Eastern shore, sweet potatoes, tobacco in Maryland and Virginia, tobacco in the Connecticut Valley, field onions in the Western States, etc.

Variations for Different Soils

In addition to these analyses, making a total of only about twenty-five in number, some further variations are made for sandy soil, loam soil, and clay soil, and for the East and West. But with every possible combination this makes a maximum total of less than one hundred and fifty analyses, to cover all kinds of crops over the entire country! But as the Soil Improvement Committee says: "It is probable that in no one State will it be necessary for one manufacturer to list all of the analyses recommended. . . . It is hoped that from the general list presented state lists may be developed, with the co-operation of the fertility workers of the various state experiment stations."

I, as a farmer, believe that is moving in the right direction. To realize how fast it is moving it is only necessary for you to turn to any State Experiment Station report on fertilizers and compare the meaningless muddle of brands listed therein with the comprehensive but simple standards recommended by the Soil Improvement Committee.

In the reports of one Eastern State, recently, over six hundred distinct brands of mixed goods were registered for sale! In another, over four hundred! And this whole outfit did not cover the field as thoroughly as the twenty-five straight, clean-cut analyses which the manufacturers have now pledged themselves to turn out in place of the camouflaged jumble which has been in existence heretofore. In the little State of Connecticut last year there were twenty-two different and distinct brands having a like composition in each of which "3.29 per cent of nitrogen and 10 per cent of 'available' phosphoric acid are guaranteed." But instead of being put out as the same thing they were sold through local agents under such euphonious cognomens as Bailey's Patent Superphosphate, Pocahontas Climax Mixture, Smith & Jones' Special Prolific Crop Producer, Great East Indian Complete Special Phosphate, and the like.

But this muddle of brands has by no means been the only bad thing in the fertilizer omelet. One awfully strong egg has been the "low-grade" goods—the stuff made to sell to the farmer who has not been educated on fertilizers, at a low price per ton. To make as plain as possible the folly of buying fertilizer on the price-per-ton basis, let me take the simplest case that can be found—that of 14 per cent acid phosphate compared to 16 per cent acid phosphate. In Connecticut last year the average price for the 14 per cent grade on the samples which the experiment station obtained was \$26.33, and the average price on the 16 per cent grade was \$27, a very slight difference, and yet it is remarkable, almost unbelievable, that there are farmers among us who would

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figure that they were saving money on buying the lower grade. As a matter of fact, in this particular instance the available phosphoric acid—which was the thing they were really paying out their money for—cost in the 14 per cent grade 9.4 cents per pound, and in the 16 per cent grade only 7.9 cents.

Now, if there are any men who will buy 14 per cent acid phosphate in the face of these simple facts, it is no wonder that they can be taken in on the purchase of low-grade complete or mixed fertilizers. In regard to this the bulletin above mentioned has the following to say:

"The buyer would save money by paying \$50.85 for a brand containing 3.29 per cent of nitrogen instead of paying \$35.85 a ton for a brand containing .82 per cent of nitrogen. It was better buying to pay \$64 a ton for a 5-7-1 analysis than to pay \$47 for a 2.5-10-1 analysis."

The reason is simple: It cost just as much labor and material to mix, bag, ship, advertise, and sell a low-grade fertilizer as for high-grade goods. These expenses are practically alike on every ton, low-grade or high-grade. Therefore it should be very evident that the cost of *actual plant food* is higher in those grades in which the amount of plant food is least. When will we get away from the idea that we have got to put on so many pounds or bags of fertilizer per acre, and realize that what really counts is the *number of pounds of plant food* the fertilizer contains?

Well, if the fertilizer manufacturers carry out the recommendations of the Soil Improvement Committee, the low-grade goods should be eliminated in a comparatively short time. They say that they are going to unite in an effort to "kill" as quickly as possible the demand for low-grade goods.

It would be a pleasure to be able to leave this comment on the splendid step which the fertilizer manufacturers have taken as it stands, but there is another bad egg in the omelet—a condition which seems to have been left without comment in the present move. I refer to the very considerable percentage of the number of brands which run below the analyses guaranteed by the manufacturer.

Of course, anybody at all familiar with the practical problems in manufacturing realizes that it is next to impossible to turn out an absolutely uniform product. But when, as was the case in the official analyses made by the Massachusetts Agricultural Experiment Station, reported in October, 1918, *43.5 per cent of the total number of complete fertilizers* fell below the minimum guarantee in one or more elements—that is, nitrogen, phosphoric acid or potash—then something is wrong in Denmark.

In many of these, of course, a shortage in one kind of plant food was wholly or partly made up by an "overrun" in one of the other elements. But even after making full allowance in this direction, 19.4 per cent of all the brands analyzed showed a shortage in money value of from \$1 to \$6 per ton.

It is very likely that the standard analyses proposed will make it possible for the manufacturer to come nearer to supplying just what he guarantees, especially as all fractional percentages have been done away with. But certainly the association should take some step to check up those manufacturers who are careless in this respect, and in any case where the practice is persisted in take some practical means to correct it.

Buying Will Be Simplified

The very important change which has been undertaken by the fertilizer manufacturers can hardly fail to benefit greatly you and me and every user of fertilizers if they put it through, and particularly the small buyer and the man who has not had the time or the training to study out the complicated problem of how to buy to best advantage under the old system.

Certainly, with the warning which the Soil Improvement Committee has given, and the frank stand the manufacturers have taken, the farmer who still insists on buying low-grade goods, and paying more for the plant food he gets than he needs to pay, will have no one but himself to blame.

NOTE: If you want a copy of the new analyses classification that has been made by the fertilizer men, write to the Soils Editor of Farm and Fireside, 381 Fourth Avenue, New York City, enclosing a three-cent stamp for reply. Be sure to mention your State, so we can get you the state classification as well as the general classification.

THE EDITOR.

Moline System of Power Farming



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"I have been able to dispense with two men and some hired help in the house because of the Moline-Universal Tractor." Wm. P. Johnson, Lovington, Ill.

"It has saved me hiring one man and keeping five extra horses." Henry Hilbert, Charlotte, Ia.

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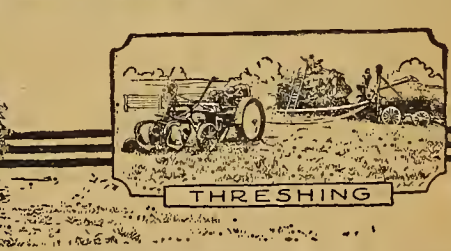
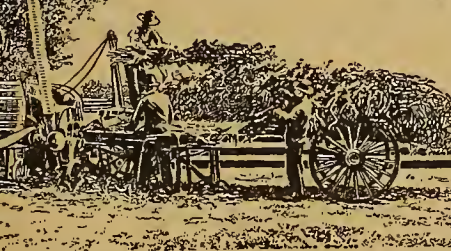
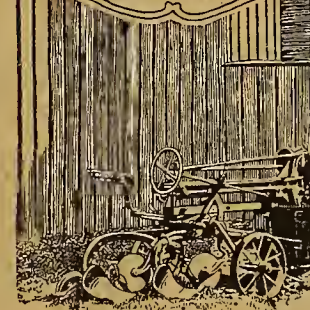
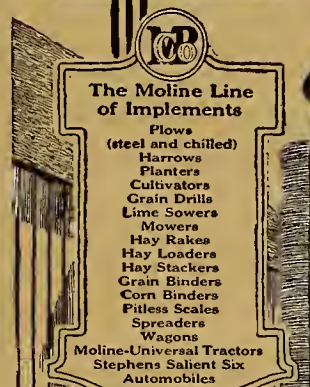
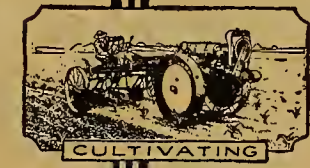
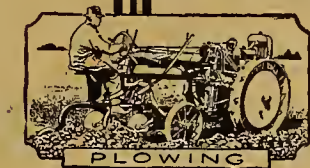
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THIS business of farming doesn't always narrow itself down to buying or investing in the thing that will make you the most money in actual dollars and cents. A convenience that will save you a great deal of work and let you break even is not to be ignored, but when that convenience, besides saving you work and breaking even, makes you money, more money than you could realize without it, then you are losing money if you don't invest.

Every farmer with a herd of a dozen cows, whether in the dairy business or not, should be equipped with some practical milking machine. Let us see if the investment will pay? The average cost of installation, taking into consideration the five most popular machines on the market, would be about \$500 for an outfit to milk four cows at once. Such an outfit would be large enough for a 25- or 35-cow herd. For a 20-cow herd a three-cow outfit would be sufficient, while for a 12- to 15-cow herd the two-cow machine is proper. Each reduction of one unit in the installation makes a reduction of about \$100 in the cost price. This brings the average cost to \$16.60 a cow for the large herd, \$20 for the medium-sized herd, and \$25 a cow for the small herd. This in turn goes to show that, while the cheapest installation for work done is with the large herd, nevertheless the first cost is not excessive in the case of the small herd.

The annual cost of operation for a 25- to 35-cow outfit, including repairs, power, labor in caring for engine and washing machines, interest on investment, and 10 per cent depreciation on machine, would amount to about \$225. This is about one third of what the average farmer is paying his hired man, where board is not taken into consideration. Divided between 30 cows, it brings the running expenses to two cents per cow per day.

But the average hired man will not milk more than seven cows an hour, which, at 25 cents an hour, costs 7.2 cents per cow per day for hand milking. One man with a milking machine can easily milk 20 to 25 cows an hour, which brings the total cost of machine milking, including the mentioned daily running expenses, to 4.5 cents per cow per day. This is a saving of considerably over one third, and in a large herd would enable the farmer to dispense with at least

one man, or it would liberate these men for other important lines of increased production. It certainly enables one man to handle more stock mechanically than he could by hand.

Not alone does a milking machine decrease the cost, but it also gives uniformity in milking. All cows are milked in the same manner every day. Every good farmer knows this is vital, and that it is difficult to obtain where hand milking is depended upon.

Think of the satisfaction the farmer enjoys with a milker on a Sunday evening in August, with the glass at 99 degrees in the stable, a herd of 25 cows to milk, and the hired man away. The farmer does not need to ask his wife to come out and do part of his work, but may use his milker. Without the milker it would mean one hour's work for husband and wife, with perspiration streaming down their faces and a cow's tail around their neck half the time. But with the milker, the gasoline engine or electric motor is started, the milkers adjusted, the cows fed, and the wife comes out and stands in the stable door, waiting to assist in carrying the milk to the coolers, and does not need to change her clothes—simply slip on a work apron. The 25 cows are milked as fast as the three best hand milkers of the neighborhood could do the work in the same amount of time. The family are ready to get into the car and go to church or visiting, instead of staying at home and milking.

"But the milking machine gets out of order!" some reader will say. But so does your mower, binder, potato digger, and planter if you neglect them, but this is no reason why you should keep on cutting hay with a scythe, your grain with a cradle, and digging your potatoes with a fork. Are you against a gasoline engine because it does not work like a human being? No, you are willing to be patient, for you realize that in the whole year it does you real service, and that you can afford to take care of it and pet it once in a while. This may be said of the milking machine. And there is as added feature to the milker, for if with the four-unit machine one unit gets out of order you still have three working, or two with the three-unit outfit. You cannot say this of your other machines. In operating a milker there is more man

or management failures than real machine failures. The Pennsylvania Railroad found that 70 per cent of their troubles with their locomotives was not due to the fault of the machinery, but to the failure of the operators to take care of them.

The milker must be properly adjusted to draw the milk in even "pulls." There are directions with every machine, and the man who sets up the outfit is a mechanic able to demonstrate how this may be accomplished. Right here is where profit or loss may be determined. I saw a farmer the other day who tried milking a herd of 35 cows with a machine. He found that because of the poor adjustment of the pull he was losing more than 500 pounds of milk, or about \$18 a day, which would mean an enormous annual loss. With slight adjustment this trouble was removed and the machine now gives perfect satisfaction.

As milkers differ in their mechanical construction, there is not space to advise the various mechanical management necessary. But the farmer can secure this information from the representatives who install the machines, who are ready to stay with the farmer until he knows how to operate it. It must be remembered that the parts are practically all made of such substances as to last a generation with good care, and this care must be given from the start.

The cow is the one to answer the question of whether she likes to be machine or hand milked. It is best, usually, to start when she freshens and stay with her. It is possible to start the machine on the cows at any time of the season, but the yield may be reduced for a time until the cow becomes accustomed to the new draw on her bag. Once she becomes accustomed to it, in the majority of instances she will give down freely. Most cows take to this draw, and will give more milk when machine milked.

Compare the milking machine with the other machines on your farm. Take your reaper and binder, bought at pre-war prices (\$125), which you use, say thirty hours a year, and for which you annually pay about \$4.16 an hour for field use. The milker, on the other hand, would be used about 730 hours a year, and cost you about 70 cents an hour for service. Comparison with any farm machine will give a like amount of service at far less cost per hour.

Loughrey, the Man Who Knew How

By Grace M. Smith (District of Columbia)

PARTLY because he had once been a gardener, and partly to see how much the folks who were managing things did not know, J. N. Loughrey, retired, of Howells, Nebraska, went to one of the garden meetings last spring.

He found that the people who were in dead earnest about growing things to eat, the people who needed that garden to help cut the high cost of living, did not know the few simple garden facts that were as A B C to him.

And in answer to a question which went begging Loughrey volunteered some simple information about how deep to plant, how to transplant, and the necessity of keeping a dust mulch on the ground. All simple points, but all vital to the success of the garden.

Done, they meant vegetables to eat in summer and some left over to put away for the winter; neglected, there would be few vegetables for summer, and not only would there be none for winter, but there would be heart-breaking disappointment, loss of confidence, injury to faith and public spirit. Somebody must tell them how and when to do things. But telling alone wouldn't do it; someone must show them how and when to care for those gardens; someone must inspire them to keep at work when drought and hot weather, insects and blight, and summer vacations invited to backsliding. It wasn't much to do, anyone could do it; and it meant preserving food and faith in one's self.

Anyone could do it. A-n-y-o-n-e. Then, like a flash, a light leaped into Loughrey's eyes, sixty-four years young, and he stood up: "Mr. Chairman, you know I've gardened all my life. If folks want me, I'll be glad to help."

Did they want him? Does a hungry boy want dinner? Does a tired girl want a lift?

A meeting was arranged for the next day. Not at the courthouse, but out on a vacant lot where some of the gardens were to be located. The boys and girls who wanted to garden were there, and Loughrey was

to weed, how to cultivate, how to save moisture, when to thin, when to prune, how to transplant, and all the innumerable small but vital questions that mean a vigorous garden or a weed patch.

Fifteen boys and thirty-three girls enrolled as members of the Boys' and Girls' 4-H Garden Club, and when winter came the crops were harvested, and bins and shelves were full of the food grown in those gardens and canned and stored for winter. J. N. Loughrey, retired and past sixty-four years of age, had made 1,870 visits to garden plots. Every boy and girl who enrolled had stayed on the job all summer, everyone had completed the project, harvested the produce, and turned in a report on the forms provided for that purpose by the state agricultural college. J. N. Loughrey, retired, had become J. N. Loughrey, returned, Volunteer Club Leader, and the community had discovered that boys and girls like to work; that it isn't work they object to—it's drudgery, work without thought and without direction. Boys and girls want to be a part of the citizenship of the country; they're proud to be given a share in the production program.

You may know some boys and girls who are not doing anything of real consequence; you may wonder what they lack to set them on the right road. And the answer is, a leader, who will give them the help they need—the information and inspiration which sends them whistling and singing and working in dead earnest to do their part. Also, incidentally, it's worth remarking that Loughrey's experience merely proves again that the man who does things in this world is the man who knows how. If you want to do something and you don't know how, learn how. You can do it.



Mr. Loughrey didn't stand around with his hands in his pockets. He did some real work.

there. Loughrey demonstrated the proper preparation of the ground and suggested what to plant. He told them about the bulletins they could get from the state agricultural college, and they appointed a secretary to get the bulletins and carry on other correspondence.

They agreed among themselves that if J. N. Loughrey would help them they'd have regular meetings and keep regular reports of the work. Mr. Loughrey agreed to meet with them.

So all summer he met with groups and individuals, gave demonstrations on how

A Farmer's Thoughts on Jury Service

[CONTINUED FROM PAGE 12]

make up for three peremptory challenges by each party. In addition, jurors may be excused by the court if a lawyer challenges them in open court on the ground that they are prejudiced or have a preconceived opinion or something like that. Three jurors were thus publicly challenged in this manner in this case. At the last, four names are stricken off to reduce the number to twelve. Twenty-two were called and "passed for cause." Altogether, twenty-five jurors were examined, while the remainder of the panel—eighty-four men altogether—waited. It took until noon to get that jury; three other courts waited.

About three o'clock—after an hour of hearing testimony—the court came to the conclusion that there wasn't anything to the case after all; the plaintiff had omitted (mainly because he had a poor lawyer) to make a formal offer in his petition of the \$10 he was willing to pay, and the court took the case away from the jury before the defendant had introduced any testimony whatever, deciding for the defense. It was then too late to do anything else that day, and the jury was dismissed. Result: A half-day wasted by eighty-four men, a whole day wasted by twelve men; jury fees \$36 for the twelve, other court expenses around \$50, and all for a \$15 claim. When I telephoned out to the farm that night, my wife said one of the boys had been real sick all day. Had anything happened to him while I was frittering my time away on that case I would have turned anarchist for sure.

I was called on four cases—aside from the three decided in the jury-room—which the judge took away from the jury after one or two days of hearing testimony. We simply wasted our time, for we rendered no verdict whatever, aside from the one which the court reporter wrote out, on orders from the court, and handed to one of our number to sign as "a directed verdict." Almost a whole day was consumed in getting a jury, one or two days in hearing evidence, then the court decided a jury was not needed and decided the case himself. Why cannot there be certain days, once or twice a week, or month, or whenever needed, when legal points in cases assigned for trial can be argued and the judge find out whether a jury is needed or not? If I farmed like the courts are run I would plant corn a few days, then decide that wheat was a better crop, and plow the whole thing under again. I'd be a rattling good farmer—wouldn't I?—for about as long as they'd let me stay out of the insane asylum!

I couldn't figure out why I was always excused from service on what are known as "personal injury" cases for some time. Finally a lawyer explained it to me. He was trying a case where a woman had tripped over a box of oranges in a grocery store and sued the proprietor for \$5,000 because she sprained her ankle. They examined twenty-six men before they got a jury. I had never heard of the case, never read a word about it, didn't know any of the litigants, didn't know anything of the lawyers, was absolutely fair-minded and unbiased. But they excused me, with nine others. The case dragged along for two or three days, when the jury brought in a verdict for the woman of \$500. I took the lawyer aside and told him I was going to be excused from further service that day, and asked him why it was I was always excused from these personal injury cases. He laughed and told me the reason.

According to him, the lawyer for the plaintiff in such a case was always eager to secure a jury consisting of old men and farmers, if possible. They are more sympathetic. Put a woman on the witness stand, with tears in her eyes, and let her tell a story of an injury received on the premises of a corporation—twelve farmers can hardly wait until they reach the jury-room to give her a verdict. At least, that's the way it was explained to me. I recall now that every personal injury case was tried before a jury of the oldest men in the panel, that the business men from town were always challenged and excused, and that most any elderly farmer was taken. That's a fair way to try a case on its merits, I must say! I'm around forty, sort of hard-faced and outwardly unsympathetic, although I am a farmer. No wonder the plaintiff's attorney didn't want me. I guess there are tricks in all trades—in trying cases fairly, according to "the whole truth," and all that sort of thing, as much

[CONTINUED ON PAGE 39]



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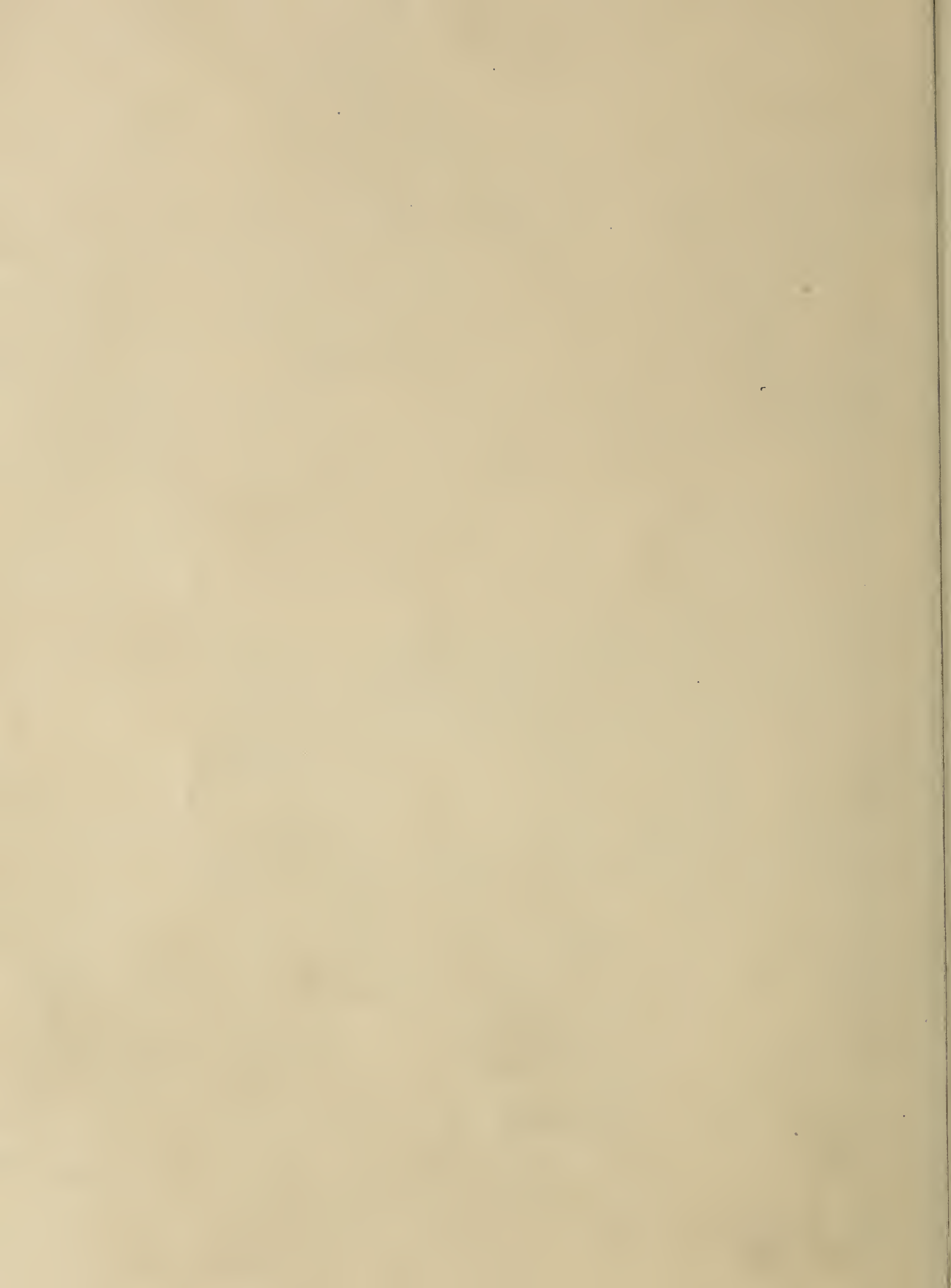
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Men Who Came Back



TWELVE years ago Parsons Motanic was a red devil for fair. He loved firewater. When stewed just right there was nothing he wouldn't start, or couldn't finish. He rented his rich wheat land and devoted his time to sincere drinking. One day he went to church by mistake. Now he is president of the Cayuse, Umatillas, and Walla Walla Indians' Temperance Society, farms his land himself, and rides in a six-cylinder car with a tonneau full of happy little Motanics.



ED SPENCER lost a good job catching for the Boston Americans because he couldn't make his thirst behave. From 1910-14 he was thrown out of all the best saloons, while the village constables gave him eight minutes to get into the next State. But he hasn't touched liquor in three years, and now he's back with the majors. And this happened long before there was any likelihood that he would have to practice up for national prohibition, too.



THERE is a divinity which shapes the clouds, hundreds and hundreds of spars. He is Amos Olsen, of Norway and Seattle. He thought he might prefer to be a fisherman. The sea air did him lots of good. At there was no money in it. Back he came to the Seattle shipyards, where he will find him thoughtfully trimming tall trees to technical tenuity as no man could, though he owns considerable real estate and doesn't have to work. But those overalls may come off, but that smile—never!



WALTER BOWEN squandered a fortune on booze. On his last jamboree his companions robbed a man and accused Bowen of the crime. The judge, a shrewd man, saw that Bowen was the "goat." So he convicted the others and sent Bowen to the country to chop wood. For nearly a year Bowen worked hard, never touched a drop, never even went to town. To-day he is manager of the judge's ranch. He comes to town once a year, just to see how much he dislikes it.



THE next time you are two hours late to wherever you are going, think of Buffalo Horn. It took him seventy-four years to come back to his tribe. Because he couldn't marry the chief's fair daughter, for nearly three quarters of a century he wandered in voluntary exile until he learned he was the oldest living Wyandotte. Then, at the tender age of 101, he returned to be head medicine man and keeper of the sacred wampum. He may be a Wyandotte, say we, but he's no chicken.

THIS handsome Russian nobleman had sense enough to know that you've got to understand and love the common folks of the world if you're going to do anything worth while. He left luxury and lived with the Russian peasants. He came back with a collection of folk songs that have made him famous. And he plays them on the "royal tympanon," grandmother of the harpsichord and the spinet, which was once owned by Louis XIV. His name is Sacha Votitchenko.

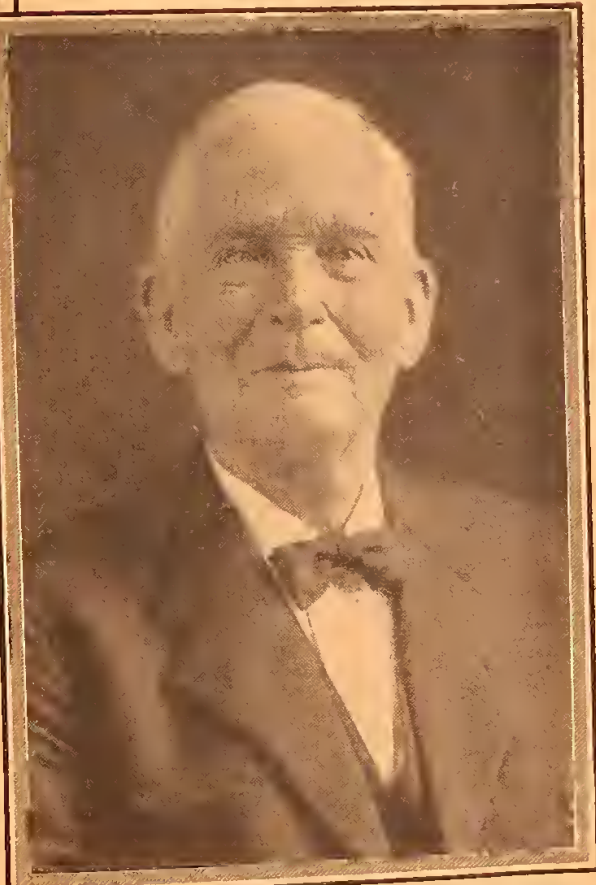
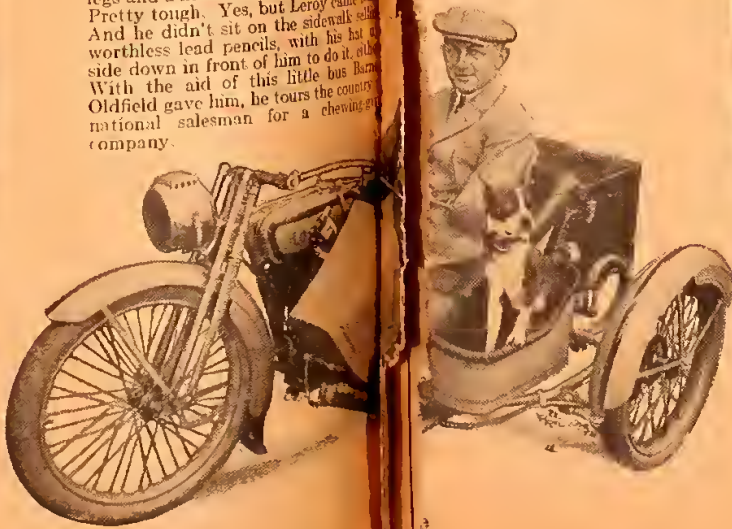


THE Hon. Fred M. Breen likes to hear both sides of every case. When he was ten the probate court of Wexford County, Michigan, sent him to the reform school. That was one side. Now, at twenty-five, he presides over the same court. That's the other side. But before he could do this he worked days and studied nights, taught himself law, and ate two meals a day while he ran the campaign that made him the youngest probate judge in the United States. His recipe for success is simple: Mind your own business; let people talk; hear when you listen; see when you look.



K. E. THACKERY—the fat one—the fat one was prospering with his patent cement glue. Then he got the chicken pox, and fire wiped out his uninsured factory. All he had left was a few dollars. A broker, hurrying to an important meeting, saw him. The broker, tickled at not missing the meeting, refinanced his loss. To-day Thackery has two factories and a prosperous business.

AL LEROY fell under a Los Angeles street car and came out minus his legs and a hand. And him a watchmaker. Pretty tough. Yes, but Leroy came back. And he didn't sit on the sidewalk selling worthless lead pencils, with his hat on his side down in front of him to do it. With the aid of this little bus Barnum Oldfield gave him, he tours the country as a national salesman for a chewing gum company.



"THE days of our years are three-score years and ten." The Rev. Albert Vogel, having preached that text many times in and around Pittsburgh, retired at the age of seventy. His declining years, however, declined to decline. To the great delight of his six children, sixty-four grandchildren, twenty-seven great-grandchildren, and seven great-great-grandchildren, he celebrated his hundredth birthday anniversary in January last by delivering a rousing sermon to his old church. After which he went upon a tour of western Pennsylvania and took a little run out to Ohio.



"IF I hurry," said Tony Moreno, "I can just catch the 7:29 to New York." He caught it. Nothing remarkable in that, but Tony happened to be escaping from Sing Sing penitentiary. Friends gave him \$150 and a ticket west. "But what a dirty trick," thought Tony, "after the hospitality the prison authorities have shown me." So three days later he "came back" and asked if he could have his old cell. "Certainly," said the warden. And locked him up.

Youth Writes a Letter to Love

By Evelyn Gill Klahr

ILLUSTRATIONS BY HERMAN PFEIFER

IF YOU'VE had any one in France, you know about Mary Hopkins; for even the men she has never nursed talk about her. They say there has never been anyone like her for just keeping you up. For, when woman's tenderness would have broken you down so that you couldn't have gone on enduring, it was the cool, firm grip of her band that brought you through the pain-stricken night.

Mary Hopkins—as homely and commonplace as the rubbers you wear on a stormy day! Even as a girl she was like that: square shouldered, square-chinned, with heavy eyebrows and heavy straight hair. She led her high-school class in mathematics, and had fewer partners at the class dance than any other girl. It was then that she made up her mind that she wasn't ever likely to have an especially good time in life, and she might as well devote herself to a noble career. She chose nursing.

And it's a curious fact that the first kiss she ever had—excepting, of course, those from relatives and others that don't count—was the one young Godfrey Hammond gave her the spring she was nursing his little brother and sister through bronchitis; the spring that she almost gave up nursing to take a rooming house with her sister Bessie.

The way he happened to kiss her was this: he stole a custard from the tray she was carrying up-stairs to the little invalids, stole it like a bad child, and then kissed her like an impertinent one. It did queer things to her. It made her hands tremble over the dishes so that they clattered and spilled their contents. Then she told herself sternly that she wasn't getting out of doors enough nowadays, which was bad for her nerves, quite as if she had not just been kissed on the stairs.

And this was the way, too, that she dealt with herself during the subsequent days when she and Godfrey were of necessity thrown much together. They almost always had breakfast and lunches alone together, since Mr. Hammond was home only for weekends, and Mrs. Hammond had breakfast in bed and usually had her lunches at the country club.

Even with two sick children in the house, Mrs. Hammond treated her maternity as if it were merely one of life's ornaments. She usually stopped in passing the sick-room, it is true, for kisses and to say pretty things to the children. But the night the little girl grew worse, there were only Godfrey and frightened servants to help the nurse. That is the night he said to her, "Muggins" (which was the children's name for her), "Muggins, you are a darling."

That was the first night, too, she dreamed of him—a dream of strange tenderness.

"Potato salad," she said to herself next morning; "that potato salad at supper. I ought to have had more sense."

She found it necessary, too, to keep reminding herself that, even if he was twenty-one and only two years younger than herself, he was merely one of the Hammond youngsters, two of whom she was nursing through bronchitis.

But he was lonelier than the other children. He had a way of wandering restlessly about the veranda in the evenings when his father and mother were not there, and then starting out alone in his little car. She often thought of him driving, driving alone through the summer evenings, and said to herself, "Poor kid!"

It was queer how everything brought their lives together those days. It was really she who gave him his excuse for going into the stationery shop that day. They were at the luncheon table, Mrs. Hammond, Godfrey, and herself—who was a marvelously efficient person in the sick-room, but here at the silver-lavished table of the Hammonds a little awkward and out

of place. The very ease and charm of the Hammonds, mother and son, seemed to accentuate her awkwardness, making her appear by comparison someone who distinctly belonged among turpentine stoups and salt rubs and thermometers and poultices.

That day at luncheon she had spoken of a magazine article on infantile paralysis that she wanted to read, and Godfrey had risen to very unusual gallantry. "I'll get the magazine for you, Muggins, this afternoon," he told her.

"I can get it myself," she told him brusquely.

"Muggins," protested Godfrey, "I'll bet a cooky you have a turnip where you ought to have a heart."

Then interposed Mrs. Hammond, patronizing as always.

"Do let him get the magazine if he wants to be useful, Muggins. It may never happen again."

So it was really Muggins, unconsciously aided and abetted by Godfrey's mother, who was responsible for his errand to the

stationery shop that afternoon. He would have gone, it is true, anyhow; but in case other customers might be there he was glad of the excuse of the magazine.

And so, almost suffocating with joy of expectancy, he went into the little shop where the shopkeeper's slim, blond daughter Mary sometimes waited on customers.

He was right in thinking he would find her there, for this was the time of day when she usually deigned to exchange magazines and newspapers for small coins across her father's counter, crooking the little finger of her over-white, over-ringed, over-manicured hand as she did it.

She was chatting, as Godfrey entered, with a stout, middle-aged man wearing a very bad necktie pierced through by a horseshoe scarfpin. She did not look at Godfrey as he entered, but he knew instinctively that she was aware of his presence, and one ringed hand went up to give a satisfied pat to the blond hair in a flat scallop against her cheek.

There was an ingratiating sound in the fat man's voice that Godfrey did not like. He wanted to kick him out; he longed for the day when he would have the right to say that his Mary should never again stand behind her father's counter.

Then he heard something that paralyzed him.

"All right, dear," the hard, little voice of the girl was saying. "I'll wait for you this evening."

"Dear," she had said. "Dear!" And she was saying it to that revolting beast of a fat man!

He released her hand just as a customer entered to buy, with painstaking selection, a box of correspondence cards.

Weak and trembling, Godfrey waited, leaning against another counter. It was hard to whip himself up again, after the customer had gone, into the first-time passion; and in the meantime the girl had acquired a gorgeous hauteur.

"Mr. Hammond,"—with a proud lift of her little blond head,—"Mr. Hammond, I must tell you that everything is over between us, for I am marrying a gentleman whom I honor and respect. And you have got no right to reproach me, for I have never did anything to you."

So in the end there was nothing but to leave her and go stumbling home, a wounded man. As he went along the street, too dazed to think, it was his senses rather than his mind that kept clinging to certain sweet fragments of memory: her fragrant presence beside him in those swift, secret rides through the starlight in his little car; the feel of her breath against his cheek when she whispered to him; the feel of her little shoulder in the hollow of his hand when his arm was about her; the covert exchange of intimate glances between them when there were other customers in the shop, while he to all appearances stood perusing with undivided interest the headlines of an evening paper.

All this that was so precious could not be gone forever! He would write to her—write something that would make her see.

He got home somehow, and entered by a side door to avoid the callers who might be there with his mother on the front terrace. He could not bear facing anyone just now.

But, going up the back stairs, he did come face to face with Muggins, white-capped and white-uniformed, carrying down the children's supper tray. She stood

aside on the landing, so he could pass.

For Godfrey to meet anyone just now was the agony of exposing wounds. He plunged into speech.

"Kiddies finished their supper?" he inquired, looking over the tray with its half-eaten bread crusts, empty egg shells, and gay little egg cups painted with yellow chicks (he wondered dully how anyone ever happened to paint chicks on egg cups, as if it were worth the trouble).

"There's nothing left for you, if that is what you mean," said the cruel Muggins. "And if you are hungry you had better go down to the kitchen and have Maggie spread you a piece of bread and butter."

It was as if she took pleasure in keeping up a feud between herself and the young man of the house.

He forced a little laugh and went on his way.

"Thanks," Muggins called after him, "for getting my magazine."

He stopped in sudden penitent remembering. He couldn't go back after it!

"Oh, Muggins," he apologized, "I am beastly sorry."

"Thank you just the same," she repeated in exaggerated sarcasm.

He forced himself to answer her in kind.

"Ob, tender heart, forgiving soul!" he called down to her.

Muggins made a contemptuous sound that was half a laugh and half a sniff, and went on her way.

In the kitchen she absent-mindedly dismantled the children's tray, putting the egg shells into the dish pan before she realized what she was doing. The boy worried her: he looked ill and feverish.

Forcibly she took her mind from him, and directed it instead on the letter she must write to her sister Bessie in this next rest hour while the children's governess was staying with them. Bessie wanted her to give up nursing and go into the

rooming-house business, and she would have to decide what to do.

Perhaps she'd better write to Bessie that she would do it.

But she had scarcely taken her little portfolio, with its equipment of papers and envelopes and its unanswered letters, out to the arbor in the back yard, when Dr. Biggins, the children's physician, coming to make his afternoon call, saw her there and joined her.

"Don't get up," he told her, as she made an effort to rise without dropping her writing materials. "I want to talk minute before we go up to the kiddies. Do you think I had better tell Mrs. Hammond that my hospital unit may receive order any time now, so I don't know when will be leaving? It doesn't seem fair not to tell her; and yet, I hate to worry her before the children are entirely well."

"So you are going?" inquired Muggins.

"Yes. Aren't you?"

"No, I am not going," she told him. He stared at her thoughtfully.

"Well, there have got to be some left here," he replied, as if to excuse her.

"I may quit nursing altogether," she told him flatly. "My sister wants me to take a rooming house in Pittsburg."

He opened his eyes wide in amazement. "Rooming house in Pittsburg! Good Lord!" he ejaculated.

"Well"—she faltered; and then, "There's good money in it," she defended herself. How could she make him understand when she herself only half understood?

"It's deadly," he insisted. "Clean towels, and worrying about the roomers striking matches on the best furniture and smoking cigarettes in bed."

She put all she could of indifference into her reply.

"Cigarettes and matches, or gallstones and adenoids," [CONTINUED ON PAGE 46]



What You and I Can Do Now

[CONTINUED FROM PAGE 5]

airs. They fail to understand the farmer's problems. They are inclined to regard the farmer as a profiteer of the rankest sort. These non-agricultural folks are willing to pay all sorts of money on the luxuries, but in to growl when one of the necessities goes up in price. Yet the New York farmers tell me that even with the present price of milk they can only afford to pay 5 per month for a trained dairyman.

When conditions like these exist it is necessary that the non-agricultural folks be taught something about the fundamental conditions the farmer has to meet. It needs to be a slow and regular process of education. The outstanding subject for study in this course should be that of cost reduction on farms.

The farmer is now pretty well worn out with advice. It is about time that extension work be carried back to the city in order to give the non-farming population some conception of real conditions on the farms. This comes right down to the economics of farming—the cost and profit factors. Unfortunately the city people see but little of the agricultural press, and unfortunately again the city press has but little material available by which to depict clearly the status of the economic problems on the farm. Yet to all thinking people the economic questions clearly underlie the sociological, in which our city ends often manifest a keen if not understanding interest.

HAVE attempted so far to show the great three-angled need for cost of production figures—the need by the farmer himself for the efficient businesslike conduct of his business; the need for tangible facts to use in presenting his case to get fair price for his product; and last, but not least, the need for such data for the purpose of educating our non-farming population as to some of the bedrock facts about farming.

The carrying out of such studies in nation-wide scope naturally falls to the lot of the Department of Agriculture. If there was ever a time when that Department could render one outstanding service to the farmer it was the time we have just been passing through, and the present time. It was the duty of the Department of Agriculture to set the nation straight as to what it cost the farmer to produce under the new scale of values.

Secretary Houston has held his present position for a little over six years. He has during this time had full authority to weed out any evils in his organization, including weeding out incompetent officials from him. That is patent to all. Yet he has been called on by the Senate Commission on Agriculture for information concerning the cost of producing wheat and other products, he refused to comply, for the alleged reason that the information contained in these reports is not dependable. He is afraid that this commission would not be able to believe his plea of incompetency on the part of the Office of Farm Management, which office conducted the studies in question, the Secretary of Agriculture in a committee from the different states to pass on the manuscripts in question. The report, however, which they touches only on the matter of cost of producing wheat, and only on one part of the material on this subject. The criticism, which it can be called, which this committee makes, is not as to the accuracy of the conclusions reached so much as to the fact that the material is not entirely logical in nature. Not only have the conclusions reached in the wheat report been questioned, but they have been anticipated by other investigations by some of the members of this very committee.

Other reports—twenty some old—mentioned by this committee, and long not reviewed by the body at all, are entirely by statistical methods, and long with important farm crops and facts, are seemingly lost sight of by the public as well as by Secretary Houston. This system of condemnation is somewhat odd, to say the least. It might be better to be submitting to the judges one report out of a box, rather than the whole lot, yet assuming to condemn the whole lot if a speck is found in the one apple.

The Office of Farm Management has been recognized as sharing the leadership with two or three of the state departments of agriculture in all matters of economics. The methods of study by these leading institutions have

in the main been the same, and have been in large degree co-operatively developed.

The Secretary of Agriculture next sought the advice of a committee of the leading agricultural economists in the country, along agricultural lines, as to revising and improving cost-study methods in the Office of Farm Management. This committee made no criticism of the Office in its report, and so far as the cost work was concerned suggested no change of importance in methods of work. In other words, there has not yet come to light any reason which would seem to justify Secretary Houston's attitude in holding back this data. His charge of incompetence has not been borne out by the facts developed to date. Still the people are without the figures on cost of production. There are plans for future development, but nothing for the public so far from these reports made under war conditions.

It is a matter of common knowledge that cost-study work in the Office of Farm Management was held up for several months during the winter of 1917-18. It is a matter of veracity between Secretary Houston and Prof. W. J. Spillman, the former chief of the Office of Farm Management, as to whether Secretary Houston said:

"The only use ever made of such studies is for such fellows as this man Baer of North Dakota to go out and stir up farmers with."

The Office of Farm Management has to date published over forty reports dealing with cost studies. The greater number of these reports have been put out with Secretary Houston's knowledge—that is, since his incumbency—as well as with his approval. These studies are worked up by the same methods used in handling the studies made under war conditions. The Secretary was advised by the Committee of Agricultural Economists, who review the work of the Office of Farm Management, to continue these methods in all essential features in the future work of the Office. The Secretary has not given a satisfactory reason for holding back this information. His attitude is not consistent.

There are two angles to the labor problem, and both of them tie up closely with the matter of a fair price based on cost of production of farm produce. One angle has to do with labor on the farm, and the other with labor in town. It is a teeter-board affair, and the heaviest end goes down. If food is cheap in town, big business has less trouble with labor, and can squeeze down just that much closer on wages without danger of troublesome reaction. Big business is therefore always interested in a bounteous harvest and low cost of food. Under such conditions the farm-labor problem becomes critical. It is impossible for the farmer to keep his plant going without paying more for his help than his business justifies. He will keep it going, however, until it begins to run at an absolute loss, for there is nothing else for him to do. Wages for his own labor, and half interest, or even no interest, on investment is better than nothing at all.

UNDER the reorganization conditions which are now upon us the American farmer has many difficult problems to face in keeping his business on an even keel. All the help he needs in solving these problems is fair play. That is all he asks. He has a right to that much. It is nothing more than fair play to expect that his own department of the Government sees that his case is properly put before the court of public opinion.

There is no question as to what the Department of Labor represents. It represents labor. A good many people not only feel, but say right out in meeting, that the Department of Agriculture represents anything but agriculture.

Secretary Houston is now making great protestation that he is interested in getting cost of production figures for you and me and our fellow farmers. If he is, that's fine. But whether he is or not, we are going to have them. They go to the very root and foundation of the knotty problems that are keeping American farming from nation-wide development to a successful business basis along sensible business lines. And, regardless of the Secretary of Agriculture, it is up to you and to me and to every one of our fellow farmers to play close and hard with our township, county, and state agricultural organizations to hasten the day of our deliverance in whatsoever manner it shall appear necessary that we employ.



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Can the Women of Other Countries Teach Us Anything About Cooking?

By Ruth Eleanor Jones

THE folks of foreign lands have many ways of cooking food that we American housewives don't have. And perhaps, because they are compelled to live more frugally than we are, they may have learned some economical tricks about making food go as far as possible in which we might find some worth-while hints for our own use.

With this thought in mind I have been making the rounds of the embassies and legations here in Washington, where ambassadors and ministers and their clerks and assistants come from all over the world, bringing their old-world customs and habits and dishes with them. And I believe I have found some mighty interesting things for you all.

Probably there is no place in this country where the customs of foreign countries can be so conveniently studied as in Washington. In the home life of Lord Reading, the former British ambassador, and Lady Reading, for instance, Washington had an example of the art of living as England knows it at its best. On the other hand, there are numerous minor secretaries on the embassy staff, and men and women attached to the various British missions in a clerical capacity, who manage to live a gracious and well-ordered life on slender salaries and at a time when living expenses are amazingly inflated. From them much can be learned.

Lord and Lady Reading are proverbially a devoted couple, and their place at Reading is a real home, as well as one of the show places of England. Moreover, they soon managed to make a home out of even such unpromising material as the British embassy at Washington, a building of mid-Victorian date and hideousness. The ballroom, which during the early days of the war was turned over to stenographers and clerks and resounded to the click of the typewriter rather than to the rhythm of dancing feet, was soon turned into a great living-room, made homelike with easy chairs, an open fire, and quantities of growing plants. There Lady Reading had her tea every afternoon when she was in town, and there her husband, despite his manifold duties, always found time to join her at the tea hour.

Lady Reading loves flowers. Her gardens at Reading are famous all over England. And they are her gardens in a distinctly personal sense, cultivated under her very watchful eye. At Washington her drawing-rooms are always filled with flowers. She takes great pleasure in arranging them herself, and regards them as part of the necessary furnishings of the room. To many, perhaps most, American women, however, flowers are a decoration, something to be had in for a dinner party or similar occasion, and to be carried out, perhaps scarcely wilted, when the entertainment is over.

Something of economy, of the elimination of waste, American women have learned during the war; and probably the full garbage pail has been put to rout for good and all. To the foreigner, however, it seemed passing strange that the doctrine of the clean plate should have to be preached as a war measure and hammered into the American consciousness. For every English child, every French child, every European child, one might say, is taught as a matter of course to eat what he takes on his plate. To leave food, which needs must be thrown away, is considered not only sinful but also bad form.

And this is typical of the wide difference between the attitude of the average American toward economy and the attitude of the foreigner of the same class. Lady Willert, wife of Sir Arthur Willert, who has been for many years the Washington representative of the London "Times" (the "Thunderer"), commented recently on the fact that among the children with whom her small boy was associated she never saw a youngster wearing darned stockings or mended clothes. In England, she went on, children in similar circumstances are expected to wear their clothes until they are worn out, and neatly darned barn-door tears are a correct part of every small boy's equipment.

Here is possibly the real crux of the

matter, the fact that it is the true spirit of thrift which must be cultivated. To live with any sort of comfort and dignity in these days of high prices and food shortages, the American housewife must learn that there is no shame, but rather modest glory, in getting her money's worth for every penny she expends, in making every purchase go as far as possible, in utilizing everything that has food value, and in absolutely eliminating waste.

It is the French housewife's magic gift for utilizing the food which others waste which has placed her in the front ranks of the world's housekeepers. Moreover, she is not niggardly. She is able to provide appetizing and nourishing food at small cost because she has made a study of the subject of housekeeping and home-making, and because she conserves every ounce of her resources throughout her entire domestic régime. Not a cent is wasted; and yet a certain fine form and dignity prevails in even the middle class and peasant homes.

Every foreigner and particularly every Frenchman, is appalled at the amount of waste in American homes. For instance, Mme. Lacombe, wife of Captain Lacombe of the French High Commission, once told the writer that it gave her an ache to see the heads and feet of countless chickens thrown away.

In France the head, neck, and lower legs of every fowl, and some of the inner organs, go into the soup pot. Even cock's combs are used, and are to be purchased separately. These make a splendid, nourishing broth. Milk may be added, or rice, or both for the sake of variety and further nourishment; and the carcass and bones of the chicken, after the meat has been eaten, make the soup even richer and better. The lower legs and feet of a fowl are rich in gelatin, and, if boiled down enough, the broth makes a delicious *vol-au-vent*.

The Frenchwoman also stews the head, fins, and bones of every fish she uses, adding a little onion and chopped pepper, and at the last rubbing in a little rice flour to make a smooth paste. When strained this gives a fine flavor to soups, or it may be eaten by itself, and is nourishing because of the isinglass it contains.

Peas go twice as far in a French household as they do in this country, for the pods are stripped of all tough and stringy matter and boiled to form a dish which some prefer to the peas themselves. Or they may be mashed through a colander, combined with milk, and thickened slightly to make a delicious pea soup.

The French, by the way, do not approve of our way of cooking vegetables. They contend that when vegetables are boiled in water all the flavor escapes with the steam. Therefore they prefer to place their vegetables in a covered casserole, with just enough water to prevent burning, and to allow them to simmer on the back of the stove, creating their own moisture.

Certain dishes which the average American regards with disfavor, such as rabbits, tripe, pigs' feet, calves' feet, and the like, gain distinction when they are cooked as the French cook them. It is both cheap and easy to keep a hutch of rabbits in the back yard, and rabbit stew with onions—only

American housewives are afraid of onions—is a delectable dish. Here's the recipe, after a French woman's method: One rabbit, salt, pepper, butter, parsley, two tablespoonfuls vinegar, one-fourth pound bacon, twelve small onions or three large ones. Put the bacon, cut in cubes, the butter and the onions in a stewpan. When the butter and the lard are warm add the rabbit meat,

which has been cut into medium-sized pieces. Turn the meat over on all sides, also the onions until they are a nice golden-brown. This takes about three quarters of an hour. Then sprinkle with flour, add salt, pepper, vinegar, and a little boiling water. Let this simmer over a slow fire for at least an hour, being careful not to let the gravy dry out. The sauce should be of a creamy consistency. When the rabbit is done, pour into a serving dish and garnish with chopped parsley.

Tripe in Corsican style is another dish to tempt the jaded palate. Cut the tripe in pieces, wash them. Brown some small pieces of lean bacon or ham in pork fat or butter. Add the tripe, and let cook until the water is evaporated. Then add a clove of garlic, parsley, onions, all finely chopped; a bay leaf, two whole cloves, a pinch of rosemary, a little tomato, fresh or conserved, and salt and peppertotaste. Cover with water, and let cook over a slow fire about two hours per pound. A half-hour before serving add some potato cut in cubes. Serve with grated cheese.

The Frenchwoman uses chestnuts in cooking, often in place of mashed potato. They are delicious creamed, and make excellent stuffing for turkey or chicken. No Frenchwoman wastes a bit of bread. She dries it in the oven, rolls it, and puts it away in glass jars to be used for breading chops or escalloped dishes. Sometimes she even grinds her bread crusts in the coffee grinder and serves them for breakfast food.

To the Frenchwoman and to the Belgian housewife, who perhaps knows as much about the art of living as anybody in Europe, the soup pot is an institution. The basis of the stock is a soup bone, bought especially for the purpose, but everything palatable goes into the pot. The water in which peas, beans, lentils, or asparagus is cooked may be combined with the meat stock to make a flavorful and delicious soup, and rice and butter added make it especially delicious. The yolk of an egg beaten into the tureen before it goes to the table improves the nourishing properties.

Greens are used for soups, and cream of lettuce is especially well liked. The outer stalks of celery are used for soup, or, if creamed, they make an appetizing vegetable. Indeed, anything which comes out of the garden may with propriety go into the soup pot, and if the customary bouquet of herbs is added the flavor is greatly improved.

The only woman connected with the Belgian legation in Washington is Mme. Phillippe Barbier, whose husband, at present one of the attachés of the legation, lost a leg in the defense of Belgium. She has known Belgium in the hands of the invader, when a hunk of black bread and a bit of soup were counted a full meal; and she can tell also of the good days before the

war, when life in even humble Belgian homes was comfortable and dignified. It is of this time that she likes to speak. She suggests that American housewives might profit by a wider use of the *pot-au-feu*, which is so popular in France and Belgium.

This is made from a carefully selected bit of soup meat, with vegetables—tomatoes, potatoes, carrots, etc., with any tasty green vegetables which may be available—and a bouquet of herbs consisting of a bit of parsley, a bay leaf or two, marjoram, and thyme. Frequently the soup is served first; and the meat and vegetables, which have been carefully removed from the liquid, placed on a platter and garnished daintily with parsley, are served as the second course and main dish of the meal. In France or Belgium a glass of wine is usually taken with the meal, and lastly a bit of cheese, the nourishing properties of which are much better understood in Europe than they are here, and a cup of black coffee. It is a simple meal, but rather more nourishing and more daintily served than one is likely to find in the home of the average American working man.

Frequently the meal is simplified still further by serving the whole *potage* at once, with possibly a salad for the second course. American families in moderate circumstances are frequently dominated by social conventions about food, and put on a four or five course meal simply because it is the custom among people of larger means, a custom developed because overfed people must have their jaded appetites stimulated by great variety of food.

By substituting instead the Continental custom of serving a few dishes, deliciously cooked, and presented in an appetizing fashion, the housewife will find that her family is being better nourished and at less expense. Moreover, the fact that there will be fewer dishes to wash is well worth taking into consideration in this day when domestic service is scarce and highly paid. On the other hand, there should be no lowering of home standards, no sacrifice of daintiness. This one seldom finds in a French or Belgian home. Dinner is usually served in the kitchen among peasants and in many of the other families, but it is a spotless kitchen, and gay with rows of shining copper cooking utensils. There is probably an oilcloth on the table, but it is snowy in its whiteness, and usually there is a bright-colored posy in the center of the table.

Something which the city housewife, who complains so bitterly about high prices, may well copy from the European housewife is her habit of going to market with her basket on her arm. When little Mme. Barbier shook her head at our city sister's custom of marketing by telephone, she was expressing the sentiments of every trained housekeeper and home maker in England, France, Belgium, Italy, and all the civilized countries of Europe. The great houses, of course, have paid housekeepers to take the burden of running the household from Madame's shoulders; but either Madame or her deputy goes each morning to market and brings home her purchases in a basket carried on her arm or on the arm of a servant.

Unhappily, with us the market basket has become a figure of speech like the "dinner pail." Our meats, fruits and vegetables, milk and bread, ordered by phone, are delivered, perhaps, in four different motors.

The evil of this is twofold. No trade man can be expected to pick out the articles ordered quite so carefully as the housewife would herself, and the cost of manifold deliveries adds from 20 to 30 cents expense to every dollar spent for foodstuffs. It can't be thrown in for nothing. Paper, string, gasoline, and man power are too high. And the woman who buys wisely, pays cash, and carries home her own purchases must help to pay for the lackadaisical ways of her neighbor, who buys late and often, exacts delivery for the price of her purchase, and phones the corner grocer three or four times a day to "please send a pound of butter, or a pint of milk, or a loaf of bread, right away."

The remedy for this condition is an organized stand [CONTINUED ON PAGE 29]



HAVING some distance to go to feed his pigs, the man in the picture, Mr. Russell of Maine, made the yoke which he hollowed out of a spruce log, dried carefully, and fitted to his shoulders.

This device reduces to a minimum the work of carrying water, garbage, picking apples or vegetables from the garden, and many other like duties about the small farm.

A Smile and a Frown Better Babies Do Both

JUST a few more letters to show you what the mothers who know think about the Better Babies Bureau:

"I received one of your always welcome letters to-day and I immediately decided I must write and tell you how much I appreciated them. They have been of invaluable service to me, and I cannot recommend them too highly to expectant mothers and young mothers. I have not only used them myself but have also passed them on to two other young mothers who have been helped as much as I have, I'm sure."

"I lost my first baby all through lack of knowledge in caring for myself, and I know that every year all too many lives are sacrificed which might be saved if women only availed themselves of the opportunity to secure information such as your bureau offers."

"This time I obtained all the books I could from the library on the subject, and read them through; but when I had finished I had to admit that your monthly letters contained all the important information contained in them."

"The most advantageous features of your bureau are that one obtains just the information one wants when one needs to know it, and that it is in such condensed form that even the busiest woman could find time to read it carefully."

"My baby himself is a most convincing proof of the thoroughness of your work. He has a sound, healthy body, a sunny disposition, and in every way seems to be perfectly normal."

"Again thanking you for your past letters, I will be eagerly looking forward to those still coming."

Mrs. F. G. S., Michigan.

"Enclosed please find fifty cents in stamps to cover postage on letters regarding the care of our better baby who arrived on December 18th. I feel that I shall need your advice in raising her just as much as I needed your advice before she came."

"I really do not know how I am ever going to thank you for all the help, suggestions, and comfort those expectant mother letters gave me, for during the entire nine months before baby came I wasn't sick an hour in all. By being active and normal and following your suggestions I have a



healthy, happy, good baby, and had such an easy confinement. Although this is my first baby, everything went so beautifully, and I felt so well immediately afterward and since that it really doesn't seem possible that it's all over. It is such a comfort to have such confidence that worries are impossible, so please hurry along my letter, for our little girl must be raised according to your instruction."

"I thank you for all your help and kindness, and anticipate great pleasure in the letters to come."

Mrs. A. A. A.,
New Jersey.

"I wish to thank you for your most cordial welcome of myself into your Expectant Mothers' Circle and for your wonderful letters. I am indeed happy to receive these letters, and am looking forward eagerly to the arrival of the next one."

"They are a help for which I am truly grateful. I am trying to follow them out to the letter, and already I am seeing results. They are also an inspiration in that they have inspired me to wish to be just the right kind of mother every dear little baby should have. It is with a feeling of happiness, contentment and, I might add, humbleness that I am preparing for the wonderful event, and I feel that it is due to your most friendly letters that I am realizing more and more the beautiful significance of becoming a mother."

"Again I assure you of my appreciation, and trust that ours will indeed be a better baby."

Mrs. E. M., New Jersey.

"It is now nearly two months since I received the last letter from the Better Babies Bureau, and how I do miss those monthly letters! I wish they would keep right on coming, for they have explained to me so simply about the problems that have arisen."

I feel especially grateful to you for your great help in caring for our baby, as I have had no other assistance. He is now over thirteen months old and is as healthy and sturdy as can be."

Thanking you most heartily for your kind assistance both before and after sonny's arrival, and wishing that every mother could know of your splendid work, I am,

Mrs. P. W. F.,
Massachusetts.



What the Better Babies Bureau Is And how to secure its help

THE EXPECTANT MOTHERS' CIRCLE: Any woman eligible may become a member, receiving each month a letter of advice on the care of herself and the preparation for her baby. Several practical little pamphlet circulars showing designs for maternity dresses and a common-sense layette are some of the helps sent with the letters. No matter at what period you enter, everything from the first month will be sent. No mention of the Better Babies Bureau is made on the envelopes in which the material is mailed. Enclose a self-addressed envelope with *Fifty Cents* in stamps, for postage, and state what month you expect your baby.

THE MOTHERS' CLUB: Every mother of young children is eligible. Pamphlets, together with monthly letters of instruction on the care and feeding of babies under one year of age (covering such subjects as colic, constipation, weaning, teething, etc.), will be sent to any mother who sends *Fifty Cents* in stamps and states the age of her baby. There are also leaflets giving diet lists, and other helps for babies from one year of age to three years. This literature is all included in the Mothers' Club's monthly service, but if the letters are not desired the additional literature will be sent for *Ten Cents*. A self-addressed stamped envelope will bring a prompt reply to every inquiry. Address all inquiries to

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with utensils that "Wear-Ever"

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Dept. 57, New Kensington, Pa. (or if you live in Canada—Northern Aluminum Co., Limited, Toronto, Ont.)

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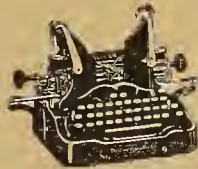
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This is the first of a series of important articles dealing with this subject of dividing and spending and saving the family's income—wisely and satisfactorily. Instead of making an abstract statement that you should do something or other, the COMPANION finds out what you want to know how to do—and tells you how to do it—usually how someone else in circumstances similar to yours did it.

Also in July—

"Men Make the Best Audiences"—says Gay Zenola Maclaren, a Chau-tauqua entertainer known from coast to coast. A man will sit with his mouth wide open or burst forth with an extra ha! ha! after the laughter subsides.

Oh, but she was "The Dear Romantic Child!" And a dangerous little siren besides. With matrimony her only escape, her conscience plays a minor rôle in her efforts to capture her cousin's fiancée. Read Sophie Kerr's fascinating story.

"He is So Changed"—complains the girl of her soldier-lover, and Laura Spencer Portor sets the stage of her dramatic problem in answer. Shall she change her ideals to meet her lover's? Read the answer.

An Unwilling Heroine—is a rare creature in life as well as fiction, but little 10-year-old Filomena Gillies caught a dangerous spy and hid under the back porch to escape applause. "The Most Exciting Thing" is a delightful story by Mary Stewart Cutting.

WOMAN'S HOME COMPANION

Published by THE CROWELL PUBLISHING COMPANY
Publishers of The American Magazine and Farm and Fireside

"My Secret"

By Readers of Farm and Fireside

First Prize

FIFTEEN years ago, just after my high-school graduation, my mother went away on a visit. I started to clean the attic as a surprise for her return, when I found a package of papers which stunned me. I read and reread them before comprehending their full meaning—that I was not the daughter of my parents, but a child of unfortunate birth.

I wept and stormed in that sweltering attic for an hour—the awfullest in my life. Why had I never been told? My first impulse was to take the "adoption papers" to my father's office and demand an explanation. Some old letters in the package made me change my mind. There was one from Aunt B—, which showed me that my parents had sworn my relatives to secrecy that never should I know I was not their own. "Even so," she wrote, "the child will be taunted by other children about being adopted." Incidents that had never meant anything now stood out clearly. For instance, when I was four my father sold out his prosperous business and moved to a distant State. Was it to protect me?

I put the package back in the chest just as I found it, and made my decision. Father and Mother had done everything for me, and were even now sacrificing to send me to the state university next fall—my greatest ambition. If it would hurt them to know that I had found out their secret, why, I would make it my secret too.

For five years I longed to confide in someone, but kept the secret hidden in my heart. Then came the time when I felt that the man I was to marry ought to know my origin, so I summoned up great courage and told him all I knew. We two had always had great discussions in our college days as to the stronger influence of environment or heredity, and I knew his views well. To my great surprise he quietly told me that he already knew. It seems that when he went to Father and Mother in the good old-fashioned way to tell them of his "intentions" they decided that he ought to know the truth about me, but put him on his honor never to tell me.

If we had not been happily blessed with three children of our own, we too should have adopted a homeless waif or two. I would not criticize the method of my parents, but I think it would be wiser for foster-parents to tell the truth. Children are bound to find out, and it could be done in a kinder way, with less of a shock than I experienced. My dear parents are gone now. They never suspected that I knew I was not their own, and I am glad they did not, since they wished it so. But to know the truth has meant a great deal to me. I love them none the less, and appreciate more fully what they did for me.

Charles Kingsley says, "The mother who loves her own child may be a very ordinary mother, but she who takes someone else's and loves it as her own, she is one of God's mothers." R. H. F.

Second Prize

IN ONE of the numerous half-grown towns of the Middle West there once lived a young girl of unusual vivacity and charm. Suddenly, for no apparent reason, she grew taciturn and sad. After weeks of this unprecedented behavior she further shocked her friends by going far away to a Catholic convent, with the expressed intention of becoming a nun of the religion which she had often ridiculed. In time she was received into the church, becoming an earnest and devoted worker.

Years later she confided her secret to an old friend. This friend, my aunt, has told me the tale since the heroine's recent death. This is the secret which has come into my possession:

One day this girl went rowing on the river near her home. She was an indifferent rower, but exceedingly self-confident, so thought nothing of going alone. All went well for a time, but suddenly one paddle slipped from her hand. Hurriedly she reached for it and, unfortunately, fell into the river, in the spot where it ran swiftest and deepest. Like most girls of that time, she could not swim. With terror inconceivable to anyone who has not had the same experience, she felt herself going

down. She gave one half-strangled scream, and then, when hope was gone, she felt a firm grasp, and she was pulled upward again. Her rescuer towed her to an overhanging tree branch, which she gripped hopefully and pulled herself up.

She looked back to the treacherous river and discovered her rescuer struggling with cramps. He was a stranger to her, uncouth and ragged. He reached a hand to her in an effort to save himself, and she drew back. The limb which held her was frail, another burden might break it and throw her into the water below. She was young, all life before her; the tramp had seen his best days, he was of little use to the world. These thoughts flashed through her mind as she drew back from that pleading hand. The man gave her one last piteous look—and disappeared.

Tremblingly the girl hurried home and made light of her accident, telling no one the true story. Days later, when they found his body, she still kept silent, and nobody suspected any connection between this unknown tramp and the girl who had become so sad.

But her conscience troubled her; she saw the man's pleading eyes and outstretched hand in her dreams. Finally she saw the only way to redeem herself—that was to give to the Christ the life which had been saved at the expense of another.

She lived many years, serving the Saviour well. Let us hope she won redemption in her final rest. B. H.

Third Prize

I AM but twenty-eight years old, yet my hair is white as snow, and I look twice my age. It had always been my ambition to become a nurse, so at twenty-two I received my diploma as first-class trained nurse, winning commendation for faithfulness to my duty.

In December, 1912, after an unusually hard week and loss of sleep, I was called on a maternity case at the home of a young couple named McD—. It was their first child, and they only needed it to complete their happiness. Mrs. McD— being a frail, delicate little woman, the attending physician urged me to be more than cautious in the coming ordeal. By eleven that evening Mr. McD— was presented with a baby boy, but the little mother was in a bad way, the doctor saying her condition was serious. Upon leaving he placed four powders on a table near the bed—two white and two blue. The white ones were a deadly drug, if not given carefully and diluted. The two blue ones were merely a sleeping compound, to be used if needed.

My patient being quiet, I seated myself in front of the fireplace to watch, but Mother Nature asked a toll in the shape of sleep. I dozed for a moment, then, hearing Mrs. McD— moaning, I moved drowsily to the bed and gave her the two powders. She lay quiet then, and I went back to the fireplace and again fell asleep. I don't know how long I slept, but I awoke to hear a gasp and a low gurgling noise. I hurried to the bedside; but the woman was dead, for—oh, let me tell it, if only once!—I had given her the two deadly powders instead of the two harmless ones in the blue papers. These were the accusing papers; I could not deny it even to myself. By my own neglect I had snatched her slim hold on life away, and left her babe motherless.

Well, they never suspected me of being responsible, as she had such a small chance; but, oh, the pitiful cry of that tiny baby and the bowed head of the husband!

That is why my hair is gray and I am old before my time. That is why I cry out in my sleep for mercy, for forgiveness for a wrong I did not intentionally do. I can only wait to die with this hideous thing still shadowing me, until it drives me mad. B. H.

Fourth Prize

DURING my second year in college I was responsible for the death of a fellow student. I really had a warm friendship for the young man; but his room-mate and I were enemies from the moment of our first meeting, one of those unaccountable enmities springing up between us for no apparent reason save natural [CONTINUED ON PAGE 37]

Tips from an Expert That Will Help You with Your Drying

By Frants Lund

Specialist in Canning and Drying, U. S. Department of Agriculture

(In an Interview with Stuart Mosby-Coleman)

ALL the fruits and vegetables you can possibly save by canning or drying should be saved. It not only adds to the nation's volume of food supply by many millions of bushels, but, what is of more immediate concern to you, it also helps cut down your family's cost of living. It does this whether you store the things on your own place for home consumption or sell them and get the cash to buy other things.

Drying ought to be extensively done by all housekeepers, for thus they can keep for their own families the best products of their farms in such a way that they can be served up in winter in almost as palatable condition as if fresh from the garden. Dried products require no outlay for expensive containers, and can be stored almost indefinitely under proper conditions, in relatively small spaces. Fresh green vegetables to the weight of a hundred pounds will average about ten pounds of dried product. Dried fruits and vegetables, if the work is properly done, will preserve their natural flavor and food value almost intact.

You can do your drying in an oven, in trays over a kitchen stove, or in some specially constructed but simple, cheap, home-made apparatus. There are small stove driers, made of galvanized sheet iron or wood and galvanized iron, so constructed that they can be used on a wood, coal, or oil stove. Within the drier is a series of trays on which the products, after being prepared, are placed for drying. Portable out-of-door evaporators are very convenient when it is desired to dry many bushels of fruits or vegetables in a day. In some sections home-made dry kilns are constructed of brick and stone for drying large quantities for an entire community.

If your drying is done in a cook stove oven, the door should be left partly opened so that the moist air can escape. For use in ovens, trays can be made of conveniently sized galvanized-iron wire screen by bending up the edges one or two inches.

Vegetables and fruits can be nicely dried by placing a pan containing the products over another pan of boiling water—this will prevent the metal bottom from getting hot enough to burn the contents. The lower pan is best if almost as wide and long as the upper pan containing the fruits, as in this case the heat is more rapidly and evenly distributed.

Driers can be easily made by almost anyone. Some fashion them of lemon boxes. The trays can be of galvanized wire screening and the interior so constructed as to allow the trays to be run in and out. The drier shown in the picture is one easily made of a simple frame containing about seven trays, the whole being covered with unbleached muslin to keep out dust and insects and to prevent the heat from escaping. There should be an opening in the top of the cover to let the moisture-laden air escape. It can be placed on the top of the stove, if the latter is not too warm. Any framework which can hold wire trays will readily fulfill the purpose. But care should be always taken to protect the products from flies and dust.

Fruits and vegetables for drying should be fresh, young, tender, and perfectly clean. Wash and clean well.

Vegetables should be put through a process known as blanching before being dried. They should never be dried without this being done first. The blanching consists in subjecting the vegetables to a short cooking in live steam or boiling water, and is done after the vegetables have been thoroughly cleaned and prepared. This blanching softens the fiber, cleans more thoroughly, helps to hold the natural flavor, and prevents the action of many bacteria. In fact, after fresh, young vegetables have been well cleaned and prepared, it is absolutely necessary that they should be put through the blanching process if the product is to prove satisfactory. If it is wished to retain the



Drying vegetables by placing a pan containing the product over another pan of boiling water.

green color of any vegetables, such as spinach, beans, etc., it is well to blanch in boiling water to which a level teaspoonful of bicarbonate of soda (baking soda) and a level teaspoonful and a fourth of salt have been added—that being the amount required for each gallon of water. If the green vegetables are dipped into the boiling water which contains the salt and soda, they must be quickly dipped for a moment only into cold water, and the surface moisture removed by patting lightly between two towels. Place at once in the drying frame. When finished in this way the green vegetables will remain green and crisp and not turn brown like hay.

Spread the vegetables in thin layers on the trays. Subject to a very moderate heat and watch carefully. If perfectly dry, they should be brittle. It is well to allow them to stand an hour or two after removing them from the heat before putting into bags. If not put into bags then, but kept open several days, they should be well heated to at least 165° F. before bagging.

Moisture-proof containers are essential for storing dried products.

These can be tin boxes, boxes lined with parchment paper, or even paper bags. A small amount, just enough for one meal, should be placed in each bag, so as to prevent the opening of products which will not be used at once. Bags which have been coated with wax, thus protecting the contents from moisture, should be used in damp climates. Dried products can also be placed in glass jars and the paper bottles and jars now made, and covered with a thin coating of paraffin. There are

now on the market many dust, insect, and moisture proof containers which are made of paper and whose cost is very small. Of course, when using any container it is important to see that it is closed perfectly air-tight.

Some of the most common vegetables grown on our farms are given in the list below for methods of drying:

CAULIFLOWER. Clean, divide into small bundles, and blanch in steam four to six minutes or in boiling water three to six minutes. Cauliflower may also be blanched in half milk and half water to which salt

and soda have been added. In that case dip in cold water, drain well, and dry at from 110° to 140° F. It turns rather dark in drying, but will regain part of color in soaking and cooking. It is sufficiently dried when no moisture can be crushed out of the pieces with the fingers. When soaking, pour boiling water over cauliflower and soak in that. Dried cauliflower is especially good in soups and omelets.

CABBAGE. Wash and trim off all dead, diseased, or discolored leaves. Shred or cut into strips a few inches long. The core and

coarse ribs should be removed, as they dry slower than the thinner parts of the leaves and may be dried separately. Blanch in steam for six to twelve minutes or in boiling water five to ten minutes. Add salt and soda to blanching water and plunge into cold water if cabbage is green and it is desired to keep the green color. Dry at from 110° to 140° F.

BRUSSELS SPROUTS. The small firm heads are dried whole. Remove any spoiled outer leaves. Wash and blanch

from three to five minutes in boiling water with salt and soda added. Dip quickly in cold water. Drain, remove surface moisture, and spread on drying frames. Start at 120° F. and increase slowly to 135° or 140° F.

GREEN STRING BEANS. All varieties of string beans can be dried. Wash and string the beans carefully. The very young and tender string beans can be dried whole. Those that are full-grown should be cut in one-fourth to one inch lengths with a vegetable slicer or a sharp knife. It is better to cut beans than to snap them, as pieces then are of uniform size and can be dried more evenly. Put in a bag of cheesecloth or in a wire basket, and blanch in steam or boiling water for three to ten minutes, depending on the maturity of the beans. If desired to keep the green color, blanch in boiling water with salt and soda added (one and one-half teaspoonful of salt and one teaspoonful of baking soda for each gallon of water). Then dip quickly in cold water. Drain, remove surface moisture according to directions given above, spread in thin layers on trays of drier, and dry until brittle. Start drying at 110° F. and raise temperature gradually to 145° F.

LIMA BEANS are shelled and dried. If gathered before maturity, when young and tender, wash, shell, and blanch from five to ten minutes, length of time depending on maturity of the beans. Remove surface moisture, and dry at the same temperature as for string beans.

ASPARAGUS. Young, tender asparagus tips should be washed, blanched for three minutes in water with salt and soda added (one and one-half teaspoonfuls salt and one teaspoonful soda to one gallon water) and dipped quickly in cold water. Dry off surface moisture, and spread in thin layers on drying frames. Dry at 120° to 140° F. The asparagus will to some extent darken, but will partly recover color when soaked for use.

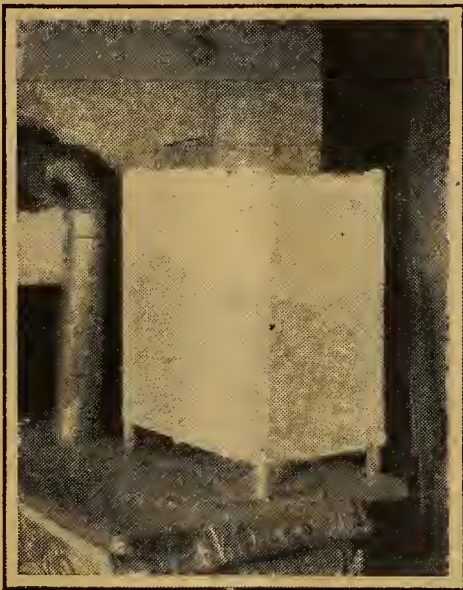
SWEET CORN. Select very young and tender corn in the milk stage. Prepare at once after gathering by removing husk and silk. Sort ears so those of same maturity are blanched together. Trim off any worm-eaten parts. Blanch on the cob in steam or boiling water from five to ten minutes, or until milk is set. A teaspoonful of salt per gallon of water may be added to the blanching water. Younger corn will require a longer period of cooking than the more mature ears. Drain well, and cut from cob with a very sharp knife. Cut first tip of grain, then slice grains about halfway down to the cob and scrape out the remainder of the grain with back of knife. In that way the chaff is left on the cob. Spread the kernels upon trays to a depth of one inch and dry at from 120° to 140° F.

PEAS. When drying the very young and so-called English sugar peas the pods may also be used. Wash and cut in one-fourth-inch pieces, and blanch three to four minutes in boiling water with salt and soda added. Dip in cold water, drain, and dry at an initial temperature of 110° F., increasing it to 140° F. toward the completion of the drying.

TOMATOES for drying must be ripe but not soft. Wash, blanch one to two minutes, dip in cold water, and remove skin and core. With a sharp knife cut in one-fourth to one-half inch slices. Cover trays with cheesecloth to prevent the acid in the tomatoes from attacking the metal trays. Put tomato slices in single layers, and dry at 110° to 140° F.

Small tomatoes like the yellow fig tomatoes may be dried whole.

Tomatoes may also be boiled, passed through a sieve, and the mass cooked down until it forms a paste. Then spread thinly on drying frames covered with cheesecloth, and dry at the same temperature as for sliced tomatoes. The paste may also be spread on tin plates and dried. (For making tomato paste see Farmers' Bulletin No. 853.) It is better to make



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GARDEN PEAS are shelled, sorted according to size, and blanched in steam or boiling water from one to six minutes. Salt and soda may be added to blanching water, but are not necessary, as peas generally keep color quite well. Remove surface moisture, and dry small peas at 110° F. initial temperature, increasing it to 135° F. Larger peas are dried at 110° to 140° or 145° F. It is very important to dry peas so slowly that they, when finished, are dry all the way through, else they may easily mildew and spoil.

Shelled peas may also be stirred for a moment over the fire in a kettle or pan with one teaspoonful of salt and a table-spoonful of sugar for each quart of shelled peas. Stir until the peas are bright and have a clear green color. Place at once on drying frames, and dry at the temperature given above.

The fresh pods of the peas, when washed, may also be dried, and used in boiling stock for vegetable soup. They may also, while fresh, be boiled, passed through a sieve, and the resulting mush be stewed as spinach and served with finely diced carrots.

Dried Fruits

Dried fruits are generally much sweeter than the fresh, as the volatile acids evaporate and the heat changes some of the starch where present in the fruit into a sugar. Dried fruit meat is generally much darker than the fresh, but this does not affect its food value or flavor. In dry climates fruits can be cured easily in the sun.

The ability to judge accurately as to when the product has reached a properly dried condition is obtained by experience, but when sufficiently dry the fruit is tested by cutting into the meat. The grain of the fruit should not show, it should be leathery, pliable, and impossible to squeeze from it any moisture.

No blanching of fruits is needed. When dry they can be put up in containers similar to those used for vegetables. After drying let the fruit cool quickly, as by cooling slowly it shrivels and has an unattractive appearance.

BERRIES. Select berries, fully ripe, for drying. Wash (the softer varieties by placing them in a colander and pouring water over them), free from stems and leaves, and remove surface water. Handle

carefully and do not bruise. It will be advisable to let dry in air for a day or so until the berries commence to look wilted and slightly wrinkled, then finish in drier. If started at first in drier commence at 110° F. Raise temperature slowly in the course of one or two hours to about 130° F. When a considerable portion of moisture has evaporated, the temperature can be increased.

CURRENTS, black and red, can be dried at a uniform heat of from 155° to 165° F. after the preliminary drying in the air or in the evaporator. When dry rub off the stems, and leave in loose piles in an airy place for a day before storing.

BLUEBERRIES, HUCKLEBERRIES, ELDERBERRIES, STRAWBERRIES (solid meat varieties only) **RED AND BLACK RASPBERRIES, DEWBERRIES, BLACKBERRIES.** Dry in air until wilted, or start at 110° F., increasing slowly to 125° to 130° F. When commencing to wrinkle increase to 140° F., and finish at that temperature.

GOOSEBERRIES must be fully ripe. They will be rather sour, and they are difficult to sweeten properly in preparing them for the table. Wash and stem. Start drying at 110° to 120° F., and increase slowly to 135° F. When half dry remove from drier, let stand until next day, then finish at from 135° to 165° F.

APRICOTS should not be so ripe that the juice will flow when breaking them apart. Wash, split with a nickel-plated knife, and remove pit. Dry very slowly at 120° F., gradually increasing temperature to 145° F. After about three to four hours' drying remove from drier, and let cool for one to two hours. Replace in drier, and finish at from 145° to 165° F.

CHERRIES should be perfectly dry. Wash and stem, and place on trays with stem end up. Give preliminary drying in sun for one or two days, or start at 110° F., increasing slowly to 135° to 140° F., in order that the skin shall not burst and the juice be lost. As drying proceeds, the heat may be increased to 165° F. Cherries may be stoned before drying, but there will be some loss of juice.

PLUMS. The small, thin-fleshed varieties are not suitable for drying. For European and Japanese varieties wash and stem. Place in trays with stem end up. They may be dried in hot sun for one or two days before placing in drier at 140° F. If started in drier, commence drying at 110° to 120° F., increasing slowly to 145° F., until most of the moisture is evaporated.

Then increase heat gradually to 165° to 170° F., and finish at that temperature.

For American varieties of plums, when medium ripe, place in crocks, cover with boiling water, cover, and let stand for twenty minutes. Drain, remove surface moisture, and dry, gradually increasing temperature from 110° to 150° F.

PEACHES. Peaches are usually dried unpeeled. They may be peeled if desired. Wash, cut in halves, pit, place in tray with pit side up, and start drying at 110° to 120° F., increasing slowly to 140° to 150° F., and finish at this temperature. For thick-fleshed varieties heat may be increased to 165° F. Peaches may be boiled in a thin syrup a few minutes before drying.

APPLES. Firm, slightly acid fall and winter apples are best for drying. Summer fruit is not as good. Wash, pare, core, and cut in slices one-eighth to one-fourth inch in thickness. Drop at once into cold salt water to prevent discoloration. (Use one-half teaspoonful of salt to one quart of water if fruit is to be left in for some time—dropped in as prepared. A stronger solution—one ounce of salt to one gallon of water—is used if fruit is dipped for one or two minutes.) Drain well, spread on drying trays in single layers, edges slightly overlapping. Begin drying at 110° to 120° F., increasing gradually up to 175° to 180° F. Dry until no juice can be pressed out of cut surface when rubbed between fingers. The fruit should not be dried hard, but be soft when broken.

Parings and cores of the apples are cut in pieces and dried at a higher temperature, if desired for apple tea. Start at about 250° F. and reduce to 185° F. The parings and cores of apples may also be utilized for making jellies or fruit paste (see Farmers' Bulletin No. 853) or for vinegar-making.

PEARS. Varieties that become soft and tough in boiling are not good for drying. Small, tender, and juicy pears can be dried without blanching or boiling. Wash, pare, slice, dip in cold salt water for apples, and dry at same temperature as given for apples. Other varieties of pears can be pared, sliced, and dropped in cold water and vinegar (one table-spoonful of vinegar to one quart of water). Drain, and dry at temperature given. Where pears are rather solid-meated it is often advisable to steam until nearly done before drying.

Can Women of Other Countries Teach Us Anything About Cooking?

[CONTINUED FROM PAGE 28]

on the part of careful housewives for good markets, paid-for deliveries, and separating the cost of food and service. In Paris, in Brussels,—in fact, in most Continental towns,—it is possible to buy a penny's worth of milk or cream or a few cents' worth of groceries.

The French housekeeper generally buys in small quantities, except where a few staples are concerned, and this transfers the waste from her own shoulders to the tradesman's. Most of the poor people buy from meal to meal—and the typical Frenchwoman will tell you that it is the most economical way—but they do not expect the shopkeeper to deliver for each meal. They buy nothing but the best, and waste nothing. And it is said that the Frenchwoman's cookbook has few recipes for "made dishes," because there is seldom anything left to warm over.

Green peppers are much liked on the Continent. When stuffed with a little chopped meat or with rice, mixed with the finely chopped inside of the peppers, and cooked in a casserole, they are delicious. Served with tomato sauce they are quite suitable for the chief dish at either luncheon or dinner. Meat loaf, with jelly formed of chicken or beef stock as a foundation, is another dish of which the French are fond, and which is both nutritious, toothsome, and reasonable in price. This is something which appears frequently on Mme. Lacombe's table, either served plain as an entrée or with a little lettuce and mayonnaise as a salad.

Scrappe made of pork, beef, or chicken may also be used as a means of cutting down the meat bill, since it has the virtue of making a small amount of meat go a long way. Moreover, scrappe can be prepared cheaply and easily in the city. Pork scrap-

ple is usually made from the head of the hog, but the heart and shank, which is rich in gelatin, may also be used.

Like the head, the shank should always be skinned before it is used. If the head is selected, eyes, ears, snout, and brains should be discarded, but the tongue should be retained. This should be scalded with a strong solution of baking soda and then skinned. The head should be cut in pieces, soaked overnight in strong salt and water, skinned, and cleaned thoroughly. The pieces should then be put on the stove in cold water, and boiled until the meat is tender and the bones will slip out easily. Then remove the pieces from the broth, and when they are cool take out the bones and run the meat through a chopper. Cool the broth and skim off the fat. To every quart of chopped meat allow one and one-half quarts of liquid, adding water to the broth if necessary. Bring the broth to a boil, and stir in cornmeal as if for ordinary mush, about a cupful of meal to a quart of broth. Let the mixture cook for half an hour, then add the chopped meat, seasoned with salt and pepper, and with sage if you wish, and let it simmer until it is well blended. As soon as it is done turn the mixture into shallow pans to harden.

When ready to use the scrappe, cut it into half-inch slices, dip it in flour, and fry it crisp and brown, using a little dripping and a very hot skillet. Beef or chicken can be treated in the same way.

This is a dish which has been tested and not found wanting by the English housewives and by their sisters on the Continent.

Omelet is a dish which French cooks make particularly deliciously, and which is frequently served in lieu of meat. And salad figures almost daily on the Frenchwoman's

menu. Water cress, dandelion greens, nasturtium leaves, endive, romaine, and, of course, lettuce, are used as the basis of crisp and delicious salads, which take the curse off many a meal which would otherwise be stodgy and uninteresting.

The women of the Scandinavian countries also have a store of household lore which the American housewife might profitably tap. For instance, in Norway and Sweden one comes up against a variety of cheeses which might be imported to our benefit. The manner in which cheese is used as a staple instead of a delicacy is also worthy of note. Also, the Scandinavian women can teach us unusual and appetizing ways of cooking fish.

Here, for instance, is a fish soup which Mme. Bryn, wife of the minister of Norway, frequently serves on her own table: Put the head, skin, and bones of a large fish, such as cod or rock, in cold water, with salt. Boil to pieces and strain. Melt one and one-half ounces of butter, into which rub one and one-half ounces of flour. Add two quarts of fish bouillon, let it boil well before adding one-half pint cream. A little cream and one egg yolk, well beaten, may be used instead. The flesh of the fish from which the bones were taken may be creamed, or cooked in any desired fashion, and served at another meal.

Norwegian rice, also sponsored by Mme. Bryn, is another delicious dish, and one quite suited to be served for luncheon with bread and butter and perhaps a light salad or a dessert to complete the meal. To one cupful of rice, thoroughly cooked, add one cupful of well seasoned chicken broth, sprinkle with chopped chicken liver, two hard-boiled eggs, chopped fine, and one-half cupful of grated cheese; serve once.

A Dreamland Carnival

By Emily Rose Burt

DODGERS flung in the doorways piqued everybody's curiosity in one small town. The posters announced that a certain girls' club invited the public "to the land of their dreams." Just below appeared a well-known bar of music from that popular song "The Long, Long Trail." No admission was charged, but mysterious "pay" attractions were advertised.

A big sign over the door of the hall chosen by the girls for the affair proclaimed in large letters, "THE LAND OF DREAMS." Within, the atmosphere was altogether dreamlandish with many soft swinging lights, bowers of evergreens, ferns and flowers, and fragrant whiffs of incense.

Mystery filled the place, for there were seven curtained-off booths or corners, each with a bold, black-lettered sign marked by a gray-colored lantern above the entrance.

The first lair was labeled THE INTERPRETER OF DREAMS, and a weird blue light (an electric bulb covered with a blue paper shade) glimmered an invitation. In the depths of the booth a tall, blue-robed figure posed as soothsayer, and for a paltry bit of silver offered to unfold the meaning of past dreams or to prophesy future ones.

Next door, a green light illuminated the word NIGHTMARES. Whoever was brave enough to enter there found himself surrounded by a collection of objects in extraordinarily bad taste. Among other things were a grotesquely trimmed hat of atrocious shape and shade, a stuffed owl, a gilded egg-beater tied with a pink ribbon, a purple crocheted tidy, a hideous sofa pillow, and a portrait of William Hohenzollern. These were all rounded up from folks' garrets—any group of girls will see unlimited possibilities in such an exhibit.

Near-by, wrapped in the warm yellow shine of candles, was THE SANDMAN'S HOUSE, which fascinated the children. Inside masqueraded the sandman himself in traditional tasseled night cap and baggy slumber garments. Over his shoulder he carried a big bag full of sawdust, and every plunge taken by a little hand into the "sand" was rewarded by a toy. Ten cents a dream seemed fair to the sandman.

Very popular indeed, behind its orange lantern, was the stall ticketed CHEESE DREAMS. In it were served those delectable concoctions of toast and cheese, brought piping hot from the kitchen through a rear entrance.

SWEET DREAMS, surrounded and flavored by a pink radiance, indicated the candy and popcorn ball booth.

PERFECT DREAMS proved a mystifying title which lured many unwary customers into the lingerie and fancy-work corner, where everything fulfilled the extravagant language in which it was described. A rosy glow of light seemed appropriate there.

A transparent crescent of paper, illuminated from behind and hung over the next doorway, was identified as a honeymoon, and shed silvery rays over the words DREAM YOUR FATE. This legend also provoked puzzlement. Everyone who entered received a magical little tissue-wrapped parcel which turned out to be a piece of wedding cake, guaranteed, if placed under one's pillow three nights successively, to bring revealing dreams of a future life partner.

After everybody had had plenty of time to enjoy the attractions, a short program was presented.

First a pretty girl and a returned soldier boy sang as a duet the song of the evening, "A Long, Long Trail." Then came Eugene Field's "Wynken Blynker and Nod," by a good reader. That was followed by a Goodnight Drill given by small tots in nighties with lighted candles. (This feature may be omitted if the entertainment comes too late in the evening for the little folks' health.)

Tableaux entitled "Famous Dreamers" were shown one at a time in a frame against a dark background. They included Joseph, from the Bible, Rip Van Winkle, Joan of Arc, Alice in Wonderland, and Saint Anthony. A chance was offered the audience to guess the character represented before the name was announced.

Joseph was a tall, dark boy and of course wore a coat of many colors. An illustrated Bible or children's Sunday-school picture cards or lessons studied will furnish ideas of early Hebrew costumes to serve as a guide. The coat is really a kind of loose robe, and should be accompanied by leather sandals worn on bare feet.

Rip Van Winkle, bowed over a gnarled cane, had a sweeping gray beard and was dressed in old Dutch fashion, loose jacket and trousers and wooden shoes. There are many illustrations of the story to follow in making him up.

Joan of Arc, a striking, golden-haired girl, appeared in her well-known suit of armor. For this occasion it was made of paper fastened to a cloth tunic. Cap, and leggings, and the sword of tin completed the costume.

Alice in Wonderland was a quaint little miss in familiar frock and pinafore, white stockings, and slippers with straps. Her hair was brushed straight back off her forehead and banded with a narrow blue fillet in the accepted Alice style. A copy

of Alice in Wonderland with the original illustrations will help in costuming.

Saint Anthony wore medieval monk's garb. A brown bathrobe with hood and girdle can be adapted to the purpose. A wig is necessary unless a bald man takes the part.

The final number on the program was a dreamy waltz, and was the signal for dancing among those so inclined.

NOTE: Directions for the Good Night Drill will be sent on receipt of a self-addressed stamped envelope. Send to Entertainment Editor, Farm and Fireside, 381 Fourth Avenue, New York City.

Canning in Hot Weather

By B. S. Johnson

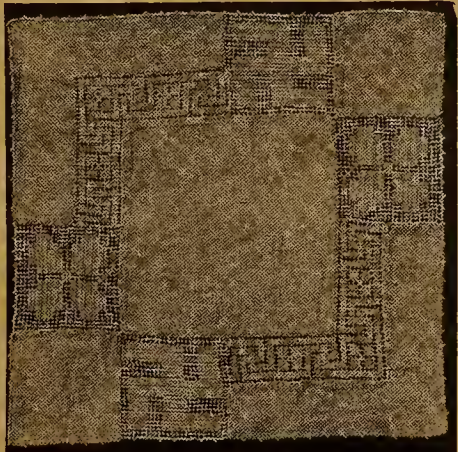
THE lack of a gas stove often makes canning in summertime exceedingly hot work, as the ordinary range heats the kitchen to an almost unbearable degree. In our home canning factory we have devised a method which has proved very efficient, especially if only one cooker is operated.

First I pulled out from the old iron heap the standard of a discarded separator. The cooker, placed on this, is just the convenient height for working over it comfortably. The small iron cream basin shelf affords a convenient place for utensils, etc. Under the cooker we use a gasoline fire pot such as plumbers use in their work. It requires a little less than one quart of gasoline an hour to operate the fire pot.

Incidentally, the fire pot is one of the most useful equipments we have on the farm. I use it frequently for soldering irons, heating nuts or couplings that refuse to move, and many other similar purposes where a quick and intense heat is required. Last winter we took it into the woods with us and made hot coffee for dinner quicker than could have been done at home on the kitchen stove.

A VALUABLE ASSISTANT—The most valuable assistant I have in my kitchen is a small box of charcoal. When vegetables, meat, or fruits are scorched, I instantly drop in a small piece of charcoal and the scorched taste entirely disappears.

Good Luck Pillow



FOR complete directions for this attractive washable pillow cover send four cents in stamps to the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio. Order No. FC-116.



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The Gunner's Mate Spins a Yarn

By N. W. Jenkins

ILLUSTRATION BY HENRY A. BOTKIN

"YOU see," said the Gunner's Mate to me, "all these stunts soldiers and sailors pulls off in time of war, and gets crosses and medals for, don't amount to a row of beans. It's just a part of their regular job. A soldier ain't afraid of gettin' shot. It's all in the day's work, and he's some surprised every time it don't happen to him. No sailor man cares shucks about gettin' drowned. It's the naturalist way to die, for a sea sucker like him. Them Germans who thought they could scare the U. S. N. with their little old U-boats had another think comin'."

"But every man is afraid of something, away down in his heart. When he goes out and faces that thing, cool and quiet, I calls that brave. I did a middlin' brave act myself one time."

"Mate, there's one thing I'm afraid of—sickness. Death I can put up with, but sickness—the very thought of it gives me the jimjams. I was always that-a-way. And of all sorts of sickness the one that always scared me the worst was the smallpox. The name of it seemed kind of awful to me, long as I can recollect."

"Some six months ago I was docked down to the Charleston Navy Yard, my ship bein' up for repairs. As I hadn't had a day off for a long time, there was a nice little furlough comin' to me. And, havin' no way to spend money where I'd been, I had a pretty good roll of the long green saved up. So far I was in luck."

"Me and my friends used to go a whole lot round the clothing factory at the yard, tryin' to make up to the good-lookin' Janes that worked there. And from such foolin' I got mine, good and hard. Fell for the prettiest, nicest, smartest kid I ever see. Name of Daisy. Blue eyes. Light hair that curled without bein' jacked up on marlin-spikes. Neat, trim figger."

"She looked at me kind of special, and I just hauled down my colors. I did, you know. I told her to call me Jack, for I was ashamed to let her know the dirt my folks done by callin' me Elijah. Didn't name marryin' in so many words, but you may bet your boots she knew how the land lay."

"She was an unpertected orphan. I liked that, for I never cared much about in-laws, and I was competent for the pertectin' myself. So I counted up my long green, got my furlough, and calculated to spend both on Daisy."

"Next day, when I dropped into the factory, I seen another girl at my girl's machine. A wall-eyed female, painful to look at."

"How's this?" says I. "Where's Daisy?"

"You Daisy's beau?" she asks.

"That's as it may be," says I, non-committal.

"I knew it," says the female. "Oh, you poor, poor young man!"

"Explain yourself—do!" says I.

"You'll never see Daisy no more," says she hysterical. "Daisy is took."

"Took where? To jail?"

"Worse—whole lot worse! Took to the pesthouse. She's got the smallpox, and they took her this morning. She'll die—nobody ever come out of that pesthouse any way but feet foremost."

"Out of that place I flashed like a streak of lightning. Knew I had to act, and act quick. I had heard things about that pesthouse. Maybe they wasn't all true. Half of 'em was enough, with Daisy there, and scared to death, as I knew she must be."

"I found my bunkie, a smart lad named Harrison. We trailed out and spotted that place where my girl was. Then we nosed around the country thereabouts till we found a little negro cabin on the edge of a lonesome wood. We could tell no one had lived in it for a coon's age, by the way the vines was tied and

knotted together across the door. I took possession of that shack in the name of the United States Navy, and then I hiked back to town and bought me a lot of stuff—a canvas cot, and pillow and blankets and

"I set there that night till it seemed likely the majority of honest folks was in bed and asleep. Then I built up the fire roarin', and I lit out for the pesthouse."

"It was the loneliest sight I ever see—

Something About Bob Seeds You Know Bob!

SOMETIMES when the foot of adversity kicks us and we pick ourselves up we find we have landed up-stairs."

Robert S. Seeds of Birmingham, Pennsylvania, is popularly known as "Bob" Seeds, and sometimes called "Farmer Bob." Adversity's largest foot, the foot of ill health, kicked Seeds out of business.

He picked himself up and moved out to an old abandoned pile of rocks, which for want of a better name was called farm.

Neighbors laughed, friends sighed and whispered that poor Bob had "gone daft," and Mrs. Seeds, having failed with arguments, sat on the steps of the old abandoned farmhouse and cried.

Bob began scratching around the rocks looking for health.

Soon he became so interested in making the rocky land grow something besides weeds that he forgot all about the search for health. Interest led to study and work.

In a few years the old abandoned farm changed to a spot so fertile that all Pennsylvania heard about it and asked, "How did you do it?" Seeds told them, and farmers living in other States wanted to know. So Bob sought to get out of telling the story by asking a fee.

The wrong way to kill a good thing is to put a price on it. The demand doubled, and then Seeds doubled the fee. Life is full of strange paradoxes, isn't it? Bob worked to be a farmer only to discover that he was a lecturer as well. For several years he told the story about the farm and what he did for it and it for him. Seeds found himself growing fame as well as crops.

Bob Seeds landed, not only up-stairs, but way up—up among the top floors. His success with those abandoned acres is one of the best examples of what thought and work will do.

The man who first had the farm probably worked hard enough, but he did not think hard enough. Bob Seeds says, "Thinking is not a pastime, but a business."

M. E. MOUNT.

NOTE: Bob Seeds has promised to tell FARM AND FIRESIDE readers the story of his success, in an early issue.

THE EDITOR.

comfortables and sheets, an ax, a broom, a kettle, a pot, a water bucket, matches, tea, sugar, crackers, canned milk and soup, and a lot of eggs, which fell by the wayside and got smashed. But the rest of the dunnage my bunkie and I managed to smuggle out of town and into the deserted shack.

"It was just like settin' up housekeepin' or goin' out West in the old days, only it wasn't no fun—things looked too darn serious. Harrison, who was awful handy with himself, opened up the house, swept and aired it, made up the bed, and cut a stack of firewood and brush. When he was gone back to the yard, he not bein' on furlough, I set with my head in my hands by the big fire he left for me, and my thoughts was terrible. He shook hands with me when he went, and I think he figgered on comin' back to get the remains."

that big, ugly frame house a-settin' up by itself on long legs in the middle of an old field, with a cold full moon lookin' down on it from the sky. No other house of no kind was in sight. Not a glim was showin'—unless you counted the lights in the

navy yard, and they were three miles away.

"I brought along a club, two lengths of rope, and a blanket. The blanket was for Daisy, and the ropes and club for the watchman. But I didn't have to club the old guy, as it turned out—he bein' asleep. I tied him up good, and it didn't take me long to locate Daisy, who was sobbin' softly to herself in her cot. Her hand was like a little live coal for fever. I said to her quick, before she could be scared of me:

"It's me, Daisy, come to take you away. It's your Jackie—your own boy."

"Maybe she didn't know I was her own before that, but she knew it then. What small show of fight the night nurse put up didn't count. I wrapped my girl up in the blanket I had brought, and carried her off like a hawk carries a chicken."

"When I had tucked her up in the nice bed I had already for her, I gave her a steamin' cup of tea. Maybe she was goin' to die anyhow, but she had a chance now to die like a lady, and not like a rat in a trap."

"I hadn't forgot to buy a doctor's book, and when my darlin' fell asleep I studied that good and hard where it told what was good for smallpox."

"Every day my bunkie came to an old blazed tree, and I stood off and shouted to him how things were and what I wanted him to bring from town for me. Next day he would bring it."

"Once in a while I took the patient's temprychoor. Don't know what good it done, but the book said to do it. I kept a rubber hot-water bag to her feet when they was cold, and I gave her all it said she ought to have. I talked to her like a Dutch uncle, and she done everything I tell her like she was my baby, which she was."

"Did she get well?" I asked.

"Sure she got well! And I never took the smallpox."

"Some luck!"

"Greenhorn's luck. I never was no doctor before or since. That one time I was a swell doctor. The day she was all safe according to the book, I made my bunkie put some clean clothes for me under the blazed tree. I put 'em on after I'd gone swimmin' and cut my hair. Then I went to town and bought rigger for Daisy. I knew how to pick out some nice shoes and silk stockin's, and I got a blue flannel skirt and a middy suitable for a sailor's sweetheart, also a big black tie. I told the young lady I bought them from:

"You put in the right kind of underpinning to go with these accordin' to specifications."

"And she understood and put in everything needful. So I got a lot for Daisy, and I went to the shack and put on a b'iler of water, and made myself scarce till she bathed and dressed; and, gee, didn't she look sweet!"

"Then I set fire to the old shack, and we watched it burn down. Afterwards I hunted up the owner and lied and said I had set fire to it by accident while I was huntin', and offered to pay the price. He said I was too honest for those parts, and wouldn't take no money."

"The very day my furlough was up, I went to the chaplin."

"Reverend," says I, "you got to splice us. I couldn't trust it done out of the service—a lifetime job like this!"

"So he spliced us."

"And you think you were pretty brave, eh?"

"Nary yellow streak in me that time."

"Deserve a medal or a cross, eh?"

"No—I can't say that."

"Why not?"

"Cause I done better—I got a Daisy."



"Then I set fire to the old shack, and we watched it burn down"

How My Chore Wagon Helps Me

As told to Russell Adams (Oklahoma)

LAST Sunday my wife and I decided to spend the day with our friends, the Chatmans, over on Deep Fork.

After an excellent dinner Joe and I strolled out to the barn for a heart to heart talk. You know what I mean—the kind of a talk we all enjoy, where we get right down to facts and frankly tell each other what we really believe, and in the course of our conversation I asked:

"Joe, what is the handiest thing on your farm?"

"Why, that's easy to answer. Come, and I'll show you," he answered as we started for the machine shed.

"Here it is," said Joe, as he pushed back the roller door, and I saw his handy wagon rebuilt from a light touring car of popular price.

"That old boat—she's a 1914 model—is the biggest time saver on the farm. She fills the need which exists between a touring car and a truck. Last spring she looked shabby, the body was a wreck, so I decided to buy a new car, and tried to trade this one in at \$200 on the deal; but the agent couldn't see it that way, and now I am mighty glad.

"I kept the old car and used it in bad weather, when I didn't want to put the new car on the road. One day Frank Simmons came along and offered me \$200 for it, but as he already owned a car and a

ones equipped with rims suitable for 3½-inch tires, the same size as used on rear wheels. By doing this, one spare tire fits all wheels.

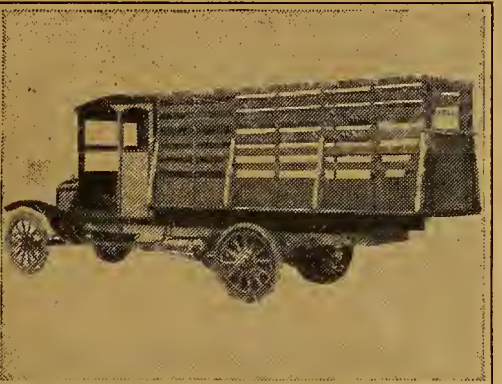
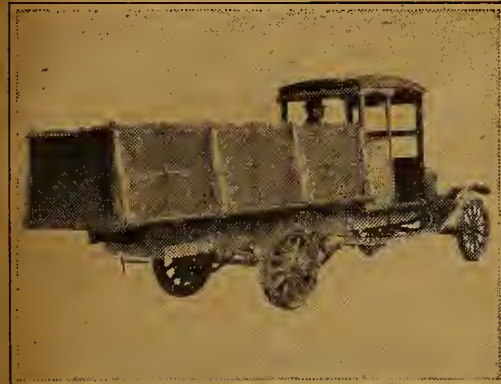
"After overhauling the chassis, I had this light express body built to order. It is made of good poplar; light, strong, well built, and will stand lots of service. The driver's cab, with roll side curtains, is comfortable in all kinds of weather.

"After the wagon was completed I tried it out on errands to town. You know I sell considerable seed corn by mail, and this wagon proved ideal for delivering a few bushels to the express office for hurry-up shipments.

"In selling by mail, success comes to the man who gets his orders filled promptly. When a person sends an order he expects results at once, and is in no humor to wait until I get orders enough to justify using a two-ton truck for delivery to the express office; and as the operating expense of this utility wagon is merely a fraction of what it costs to run my two-ton truck, I find it very profitable for light jobs.

"Harvest came on with a rush last season, and, as you know, we were short on help. Well, to make a long story short, Elsie—she's only fifteen, you know—accomplished more with this handy wagon than four men could have done without it.

"While I was busy with the wheat, she



The convertible bed multiplies the uses of a truck on the farm

truck, I was curious as to what he intended to do with her, and asked him.

"I learned that Frank intended to convert her into a 'chore wagon,' as he termed it, and that set me thinking. If Frank Simmons could use a handy wagon, why couldn't I?

"I dismantled the old touring body—selling it afterward for \$15—and overhauled the running gear and engine. As the engine compression was poor, I had oversize pistons fitted. I discarded the front wheels and replaced them with new

rushed the cream to market—we sell sweet cream to the ice-cream factory above what is paid for sour cream—brought back needed supplies, making the round trip in about a third of the time necessary for a truck. She delivered oil and twine to the binders, and supplied the hands with fresh cool water from the well.

"Nope, this wagon's not for sale. Its actual worth is about \$300, but I wouldn't take twice that amount and try to do without it, for it certainly fills a need not supplied by touring car nor truck."

Keep Your Eye on the Garage Man

By Earl Rogers

GETTING good work done on your car is a problem. I have been up against it at times when I have been too busy to do anything on the machine myself, and I know what it is. When it comes to finding ordinary trouble I believe I am as good as the average. But when it comes to some part of the car which I have no tools to fit and cannot afford to get them for what little work I have to do, I am ready to take the job to a garage man who is properly equipped.

I have found ways to get around high-priced and unreliable garage workers. There are a good many efficient men who fix automobiles, and there are a lot more who work on your car to put in time and charge you for it.

A small garage started up in our town about ten years ago which does no advertising, and no one would know it was there except by hearsay. I found out about it, and had some work done and liked it. I have sent others there. I am going there within a few days for some valve-grinding. This man says he gets enough to do without advertising. I once had a car run tight in the transmission. He worked nearly a day on it. After two days it tightened up worse than ever. I got it back in his shop. He fixed it again, and found the real trouble. I asked him what I was to be charged. He said it was his fault, and no charge, of course.

There are probably such men in your town. They usually own their own buildings, and do not bother with gasoline sales. That takes time from a regular garage man, and does not pay very well.

Besides this there is another opportunity to get first-class work done by a good man for less money—the private chauffeur. He often has time on his hands, and is an expert in most cases. Perhaps he has room for another car, and usually the owners do not object to his making a little on the side so long as it does not interfere with their own driving and care of cars.

How About Your Boy?

HERE is a poultry keeper who has the right idea about boys. When his two sons grew big enough to help him in feeding, he gave each a pen of 30 hens. He bought their egg production at current market prices, subtracting at settlement time pay for all feed used. One boy in the months of December, January, and February cleared \$42.30.

"Of course," said the father, with a twinkle in his eye, "I selected the hens for the boys, and saw to it they got fairly good ones."

This man had made good with hens, and he knew how to make good with boys. In contrast with his action was that of the farmer, too often duplicated, who gave his boy a pig, yet pocketed the money it brought when sold at maturity. The best is none too good for the farm boy, Dad's cheerful helper in chore work. Let him have it!

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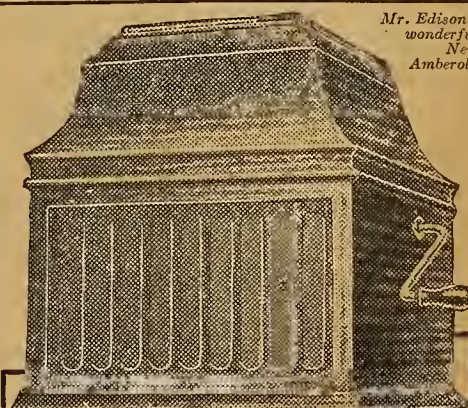
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Housing Farm Machinery

By E. J. G. Phillips

THE thrift, business ability, and success of a farmer may be fairly estimated by the care he takes of his farm tools and implements. These aids to economic agriculture in the United States were valued at one and a quarter billions of dollars in census of 1910, and the thoughtful person must acknowledge the immense losses in the aggregate which would result from the general failure properly to house and care for this class of machinery. An investment of such proportions in articles which are used for only a comparatively short time during each year must impress one with the importance of providing suitable housing for the relatively long periods when the implements are not in use.

It is unnecessary to provide an elaborate or expensive building for this purpose, because its principal use is to protect the machinery from the weather. The implement house is unlike the barn, which, especially in cold climates, must be built to protect stock from the cold, or the granary, which must be capable of holding a great weight of grain. All that is necessary is a building of simple construction, strong enough to support its own roof, together with the possible snow loads, and rigid enough to resist wind pressure.

Perhaps the cheapest, most available and commonly used material is wood, which, if kept carefully painted, is reasonably durable. Galvanized corrugated sheet metal is also used to some extent, either for

tice to use two doors to each opening. These may be operated independently or may be flexibly connected together by two strips of steel or wood, one near the top of the door and the other near the bottom. This permits the movement of the two sections as one, but overcomes to a large extent the tendency of large doors to warp.

It is frequently desirable to partition off one end of the implement house to be used as a garage. In that case an 8-foot opening into the garage may be provided. The garage should have a concrete floor, and windows enough to give good light. A small work-bench and a cupboard for storing supplies, etc., will be found convenient. In fact, if the garage is made a trifle large and a door opening is provided into the main part of the implement house, it will be very convenient to use in making light machinery repairs.

Do You Believe This?

By P. C. Grose (Ohio)

IN OUR section of northwestern Ohio, land is selling from \$150 to \$200 an acre, and many farms still have a small area of woodland. In most cases these are being preserved—that is, they are not cut off entirely, but the decayed and fallen trees are used up each year, with possibly an occasional green stick for wood or lumber.



The openings in an implement shed must be large enough to accommodate the widest farm machinery

covering the entire building or only for the roof. Concrete is best for the foundation walls and piers. If built in a well-drained location, floors are unnecessary. Floors of concrete are, however, sometimes used to good advantage.

Open implement sheds—that is, structures having a roof and with one or more sides open—are sometimes built to shelter farm tools, but, generally speaking, a building which can be closed all around and yet built with doors in such a way that an opening is available at any point on one side is the most satisfactory and serviceable. If farm tools are to be housed at all, the slight additional expenditure necessary to close entirely the building will assure them being well housed.

The implement house shown in the illustration is about 28x64 ft. in size. The roof is covered with corrugated galvanized sheet metal. A concrete floor in one end provides a place for buggies with rubber tires or other vehicles which should not stand on a dirt floor. This building has two 16-foot doorways on the side illustrated, and one 16-foot doorway on the opposite side, giving easy access to any part of the building. One continuous door hanger track extends along the entire side on which the two doors are located.

The openings in an implement house must be of large size, about 16 feet wide to accommodate the widest farm machines, and sliding doors are the only practical kind. Swing doors of large size are sure to warp and sag, especially when made of stock lumber. They are also subject to being blown about by the wind, damaging either the door or the hinge fastenings.

Although the doors of this building are made in one section, it is much better prac-

In the last year, however, a number of progressive and close-figuring farmers cut off their wooded areas entirely, selling the timber and working the tops into fuel wood. At first the effect upon our minds was staggering. Our attitude was severely critical.

We are not so sure, however, but that figures lend generous approval to their methods. So far we have been preserving our woodland, about twelve acres, using little save the decayed and fallen pieces. Our figures arrayed themselves in somewhat this fashion: 12 acres at \$175 an acre amounts to \$2,100. This sum at six per cent interest equals \$126 per annum. Thus we were brought to consider the simple proposition that the woodland, unless it was increasing at the rate of at least \$126 a year, had better be cut off, the timber sold and worked into fuel wood, and the land put to crops.

NOTE: Not all of our readers will agree with Mr. Grose on this question. If you disagree with him, write us and tell why. We will pay for all replies which we accept. THE EDITOR.

Your Field Acreage

By E. V. Laughlin

IT IS comparatively easy to figure the acreages of rectangular fields when the same have produced corn; provided, of course, that the rows are the standard distance of 3 feet 6 inches apart. Count the hills each way and multiply these results together. Next divide by 3,556, the approximate number of the square areas enclosed between four adjacent hills of corn. The quotient will be the area of the field in acres.

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“My Secret”

[CONTINUED FROM PAGE 30]

antipathy. This enmity led to a fist fight between us in which I got decidedly the better of the encounter. After that our fellow student “cut me dead,” until one afternoon we met in the hallway of our rooming house, when he deliberately got in my way and tried to shove me to one side. He was at least thirty pounds lighter than I, but prided himself on his wrestling abilities. I saw he was aiming to get into a bout with me, defeat me in the contest, and thus revenge his room-mate.

“Come on, you big bully!” he cried, and immediately we were clinched and sparring for advantage. He was wiry and quick as a cat; but I was his superior in muscular strength. I did not become angry until he called me a “big bully.” That riled me, and getting him across my left hip I gave him a fling with my whole body, which sent him head-first into the hallway. His head struck a door jamb, and he lay motionless, blood running from his nose and mouth.

Sure I had killed him instantly, I stood staring at him in horror, until presently he moved slightly and moaned a little. I looked about for possible witnesses to the affray, and, seeing no one, I carried the young man into my room, which was close by, placed him on the bed and shut and locked the door. After I had bathed his face, neck and wrists in cold water, he was able to sit up.

“It was all my fault, old man,” he said. “I had no business to tackle you; but I was so sore at you for beating up my chum that I decided to pick a scrap with you, get the better of you, and tell all the boys about it. But,” he went on quickly, “please don’t say anything about it. I don’t want my chum to know.”

He was ill, off and on, during the rest of the term, and died at his home a month later. His physician diagnosed his case as a small fracture at the base of the brain, which the patient claimed he had sustained in a fall down a stairway. I let the matter rest at that, feeling sorry for my part in the accident, but that it would do no one any good to reveal, publicly, “my secret.”

H. V. S.

Maybe Your Boys Could Do This Too

[CONTINUED FROM PAGE 8]

to Willie, but he had none, for he finished second. His penmanship and lack of business ability lost for him. Johnny’s calf didn’t do as good as Willie’s, but his report was better written.

Both boys are well known by the most prominent live-stock men in the county. John Clay, a doughty Scotchman who is known internationally in the live-stock world, is a great friend of the boys; and when they are in Chicago he takes them all around.

The calves they had this year were sold them at a nominal price by L. B. Cannum, an Angus breeder of Aledo, Illinois. He became attached to the boys three years ago, when he saw them win in a calf-club contest, and offered them the best of his herd the next year.

The bull which sold for \$600 was sold at auction at Chicago, in connection with the International. The bidding on stock up to that time was slow, but when the kids entered the ring with their yearling the contest became hotter than any time during the afternoon. After the sale the breeders immediately wanted the boys to join the association, and they did.

“The hardest job we have is when we get mail orders,” said the father, “and quite a business is done in this manner. Johnny takes care of the letters, and Willie picks out the hogs. The reason I say it is hard is because I don’t know if Willie’s selection will suit the buyer; but we have never had any kicks, so I guess the little rascal knows the business.”

“The bulk of our hogs have gone to Kentucky, Maine, Missouri, Pennsylvania, Illinois, and Iowa. There are other States, of course, but the biggest business is in these.”

I think this story contains a big idea for fathers. This man let his sons show the stuff that is in them, and he is not worried about the future of the boys. Moreover, the boys are not discontented with farm life. They are in business; the only danger is that they will have made too much of a success and will have retired before they have served their usefulness.



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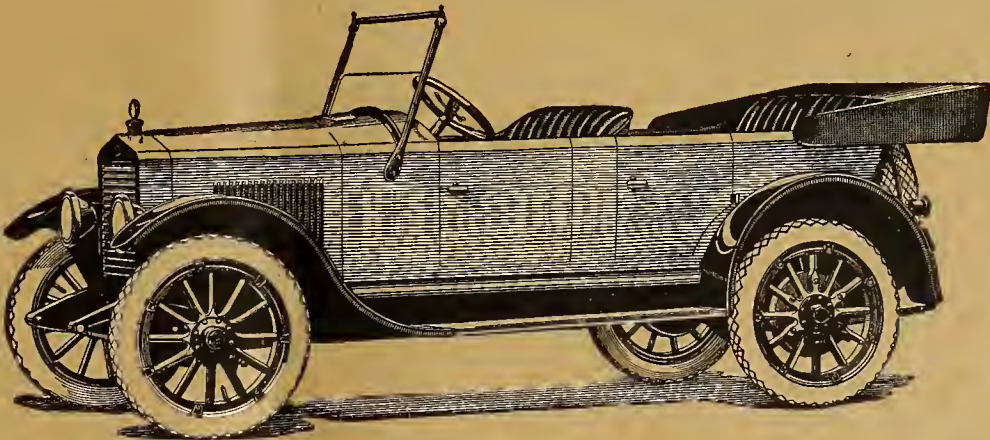
even with some larger cars. And as for ease of riding there seems no standard known to motor cars that the Essex does not surpass.

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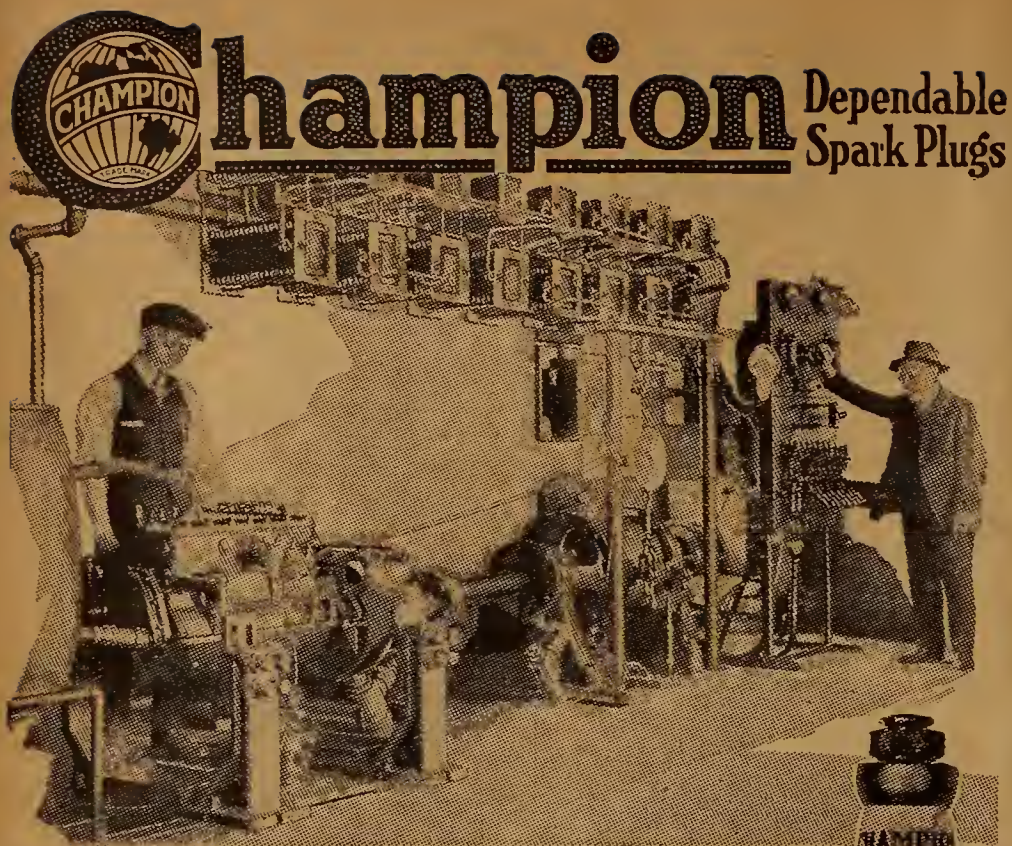
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Why I Don't Have to Work So Hard on My Farm Any More

[CONTINUED FROM PAGE 9]

individual cow, but production paid for this trouble. A ration with lots of carbohydrates will make one cow fat, and another will get thin on the same ration. This must be changed so as to meet the individual animals in order to get the best results.

Now I feed the cows about one pound of grain for every three and one-half pounds of milk produced. The more the animal produces the greater is the grain allowance. However, I give the cows all of the clover or alfalfa hay they will clean up, and from 30 to 35 pounds of silage per head daily. The grain ration is composed of corn, oats, gluten feed, and oil meal. The hay and silage, in liberal amounts, serve as bulk to the grain ration, and at the same time cheapen the cost of production.

I have a son, Roy, who is a junior at the University of Illinois. During the vacation months he helps out on the farm, and this gives him a splendid chance to put into operation some of the theoretical stuff he gets at college during the year. This is also profitable to me, for I watch him closely, and learn many things about scientific agriculture which are helpful, and which I would never get if left to myself.

He is back at school now, having recently been discharged from the officers' training camp in Texas. He enlisted in the army, but his good work got him the chance to become an officer. He is only twenty years of age, and is specializing in dairying and farm management.

When I took over my farm I used to make butter and sell it to the people in

what is possible through the use of the most modern methods. I keep daily records of my business. I can tell what is what in a minute, and at the end of the year I can tell how much I have made. This helps me in many ways, and figuring my income tax is only a minute's work. The figures are taken from my books, which are also used by the college men in their records.

When I have a cow which is producing below my standard of 8,000 pounds of milk, and I can replace her with a higher producing cow, I sell her. The really unprofitable animals go to the butcher, but the others I sell to farmers. My word is my bond, and before I sell a cow to a farmer I tell the man what she has done for me, what I am feeding her, and how much. Of course, some complain they can't get the same results, but this is due to their failure to handle the animal as I have done.



Foss and one of his prize producers

Each cow is charged with all of the labor it takes to care for, feed, and milk her; she pays for her feed, interest on the investment, rent of the barn, depreciation, and all costs which pertain to her. Her credits are milk, increase in value, manure, and calves. The cows are charged \$3 a ton for straw as bedding, and only get a credit of \$1.50 a ton for manure.

I have figures on the individual cow, and thus keep a check on each animal. The herd, as a whole, is producing more than 300 pounds, and I hope for 400 pounds.

Aside from improvement of dairying, I have learned things about soil management and what fertility means to production. Like feeding cows, the soil must have

Prize Contest Announcement

How I Make My Work Easier on the Farm

FARM AND FIRESIDE will pay, respectively, \$15, \$10, and \$5 for the best three letters from farmers telling, in 500 words or so, the systems they have worked out with their own heads to increase their farm income and at the same time do less hard work. If you have done this you owe it to your fellow farmers to pass the good news along. We will pay for all letters we use in addition to the three prize letters. Address Contest Editor, FARM AND FIRESIDE, 381 Fourth Avenue, New York City, and get your letter in by June 25th.

THE EDITOR.

Freeport, a town nine miles from my farm; but when the condenseries began to get common I decided I couldn't compete with them, and also found I could get more for my milk by selling it to them.

There are 96 acres in my farm, and almost all of it is under cultivation, for I aim to grow practically all of my feed. Of course, I have to buy some mill feeds and oil meal; but all of the corn, oats, silage, and hay are produced on my farm. In doing this I don't sell any of my fertility. I can go into any field and dig up manure which has not rotted. We clean the barn every day, and spread the manure as soon as the wagon is loaded. This saves a big job at one time, and by use of a carrier I can easily clean the barn and load the spreader.

In 1908 I bought a pure-bred Holstein cow, and bred it to a registered sire which the University of Illinois loaned me. For fourteen years I have been working in conjunction with the college, and it has been to my benefit. The results, however, are mutual, for my experience with their methods is used as a leverage on other farms.

Somewhat or other some men claim there is too much theory about colleges. I haven't found this to be true; and in order to convince other farmers of the value of breeding, balancing rations, milk-testing, and the like, my experiences are used to show

fertilizer to maintain and increase yields, and through a medium of manure, limestone, and legumes I increased my crops greatly during the last eighteen years.

My corn crop now runs around 60 bushels an acre, compared with 30 bushels which I got the first year. I am for permanent farming, and for this reason I am always looking to the future. I must have feed for my cows, and the cheapest way to get it is to produce it myself. Practically the only plant food that gets away from the farm is in the milk and hogs, and the manure, legumes, and the manure of the oil meal and gluten replace this.

I often have been asked why I keep a man on such a small place, and why I didn't put in a milking machine as a labor saver. I only milk 14 cows, and two of us do this as quickly as a machine. Besides, when I want to get away a day or two I can because I have a man. I am not a slave to work. This idea of sun-up to sun-down, every day in the year and every year of my life, does not appeal to me.

In the busy season one of us can be in the barn and the other in the field. We don't have to kill ourselves in this way, for we know what is to be done, and do it.

Hired help is hard to get, and I believe in human treatment of my man. If I work him too hard I soon get a reputation, and a good hand around a dairy farm is not the easiest person to find.

How the Trees on Your Farm Help You Grow Better Crops

[CONTINUED FROM PAGE 6]

well-grown tree. The point is to avoid cutting off the small roots and tendrils by which the tree obtains nourishment from the ground. If a tree has a top 15 feet across, the roots will spread out under the ground for about the same distance. The only safe way is to tie a string to the trunk, measure off eight feet, and then draw a circle 16 feet in diameter about the tree. Then dig down all around this circle, carefully working underneath the roots. A hole 16 feet in diameter should be made ready to receive the tree as soon as it has been taken up. Pour in plenty of water when you fill in the earth after the tree has been set in place.

Many farmers depend on the trees on their land for their summer firewood. This wood usually consists of scrub willows or elm, windfalls, and the trimmings from larger ornamental trees about the farm.

Small wooded tracts are quite common on many Middle Western farms. They may be of some benefit to the farmer

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through the harboring of birds that kill crop-destroying insects, but that factor is too small to be considered in comparison to the value of the land for cropping purposes. These tracts are not large enough to draw a great deal of moisture, and are usually along creeks or lowlands where there is enough moisture anyway. Paying taxes on such land is a losing proposition, and you can't blame a farmer for clearing it as quickly as possible, and turning it into cash.

A tree or trees in the middle of a field may look nice from an artistic standpoint, but the farmer is no

artist. The shade from one such tree may cost the farmer from \$10 to \$50 every year. Can you blame him for cutting it down?

I think every farmer is anxious to have as many trees around his buildings as possible. They improve the appearance of his home and increase its value. But it is different with cultivated land. Here shade is something to be avoided, from an economic standpoint.

A Farmer's Thoughts on Jury Service

[CONTINUED FROM PAGE 23]

as in anything else. I know this much: if I'm ever arrested for any crime I'm going to be asked to be tried by the judge alone if I'm innocent, and by the jury if I'm guilty. I'm willing to let the judge mete out justice if I didn't do any wrong; if I did any wrong, I'll take my chances on being able, with the help of a good lawyer, to hoodwink the jury and make my getaway.

Anybody can scold, I realize that. My services on the jury and my scolding are of no value if I can't suggest any remedies. Well, let's see: I'm not egotistical enough to believe that anything an individual farmer has to say will result in amending the federal or the state constitutions and changing the course of jurisprudence. But I said in the beginning I had some very positive convictions, and I'm going to express them, whether they do anybody else any good or not. If I had the power I would change our present jury system in the following manner:

First: I would cut down the size of the jury from twelve to six or seven, thus reducing the expense one-half and making necessary only one half as many men, leaving the others to their more or less useful and honorable occupation.

Second: I would make the jury service compulsory on all men, just as military service was made compulsory under the draft law during the war. Why should one man be obliged to leave his business and serve for five or six weeks, or even longer, while thousands never serve at all? I would compel every voter, with certain restrictions perhaps, to serve whenever called, for one week or ten days or two weeks, and then be exempted for a year or two or five, as the situation demands, according to population of county, and so on.

Third: I would make a verdict possible on the agreement of two thirds or three fourths of the number on the jury, instead of unanimous, except in cases where human life was at stake. I have seen too many cases come to nothing and eventually be dismissed because one man out of twelve held out and refused to abide by the decision of the majority. My suggestion is the practice in some States; I would make it general.

Fourth: I would change the laws so as

to minimize the number of actions to be tried before a jury, and increase the number to be tried before the court alone.

Fifth: I would work out some scheme whereby the judge would have the main legal questions argued to him in advance of a jury's being selected, in order to avoid the practice of taking cases away from the jury after much time had been consumed.

Sixth: I would limit the number of jurors to be examined in any one case to a much smaller number than now, making both sides agree to take a jury of whatever size, no one of whom was found, on brief examination, to have any interest or prejudice in the case. It might, perhaps, be advisable to have the judge examine the jury, to save time and repetition of questions.

Seventh: I would prevent jurors being disbarred from a case simply because they had intelligence enough to read about a case, provided they had not formed any preconceived opinion as a result of what they read.

Eighth: I would allow a witness to "tell the truth, the whole truth, and nothing but the truth," after taking an oath to do so, and would no more permit a lawyer to prevent a witness' doing this than I would allow him to tamper with a witness outside of court.

I guess that's enough, to begin with. When these things have been accomplished, I think I know of two or three dozen farmers in my neighborhood who will be much more willing to sit as jurors than they are just at present.

I'm back on the farm, after a month in town. I had to live at a boarding house and eat "store food" for a month, and I'm heartily tired of it all. The farm never did look so good as when the afternoon "local" dropped me off at the town where we do our trading and my wife and oldest boy met me with the car. I know this much: it will take a murder or some principle to which I am willing to give almost my life before I will bring any action in any court. I'll do most anything to settle any and all disputes out of court, rather than to go before any jury of "twelve good men and true" and abide by the verdict they may bring in on the evidence the court may or may not allow to come before them!



Before

A typical view of West Michigan Pike, Van Buren County, Mich., before Tarvia was used.

Tarvia

Preserves Roads
Prevents Dust -

After

A view of the same section of the same road after Tarvia was used. Note smooth, dustless, easy-traction surface.

THE "Before" photograph above shows a section of West Michigan Pike, Van Buren County, Michigan, as it looked in the summer of 1916.

But the taxpayers of Van Buren County realized that such roads as this not only hampered the development of the county and made travel difficult, but that in the long run they cost the community more than good easy-traction roads.

The "After" picture shows the same road, photographed at exactly the same spot, after macadamizing and treating with "Tarvia-B."

West Michigan Pike is now a firm, mudless, dustless road, water-proof and automobile proof, over which full loads can be hauled to market with speed and economy.

And wisely, the taxpayers of Van Buren County propose to keep this road new. Last year they gave it a second treatment with "Tarvia-B." Thus at very small expense they protected their original investment and now have a fine piece of highway that brings their markets at South Haven and Watervliet miles nearer to each other.

The satisfaction felt over the vast improvement effected by the use of Tarvia is officially expressed in the following letter from the engineer of

the Van Buren County Road Commissioners, Paw Paw, Michigan:

"The Van Buren County Road Commission has been using 'Tarvia-B' for some years to maintain about 20 miles of macadam road and it has given the greatest satisfaction. We have entirely got rid of dust and ravelling and it is the opinion of many observers that the roads get better instead of worse.

"This year we had about two miles of macadam which was so bad that the State Highway Department advised covering it with gravel but instead we patched the holes with 'Tarvia-KP' (which by the way is something that is indispensable in our business) and treated the surface with 'Tarvia-B' and stone chips and today the road is in better shape than when new.

"We also have been trying out 'Tarvia-B' on a trunk line gravel road, the gravel testing about 75% stone. The results have been very good in spite of the heavy traffic. It produces a smooth, durable surface which will be better the second and third year than the first. We are now building a 30,000 gallon storage tank so that we can always have a supply on hand when we want it.

"Aside from treating the roads with 'Tarvia-B' there is no maintenance cost but a little attention to holes and drainage.

"Tarvia has solved our macadam road troubles for us.

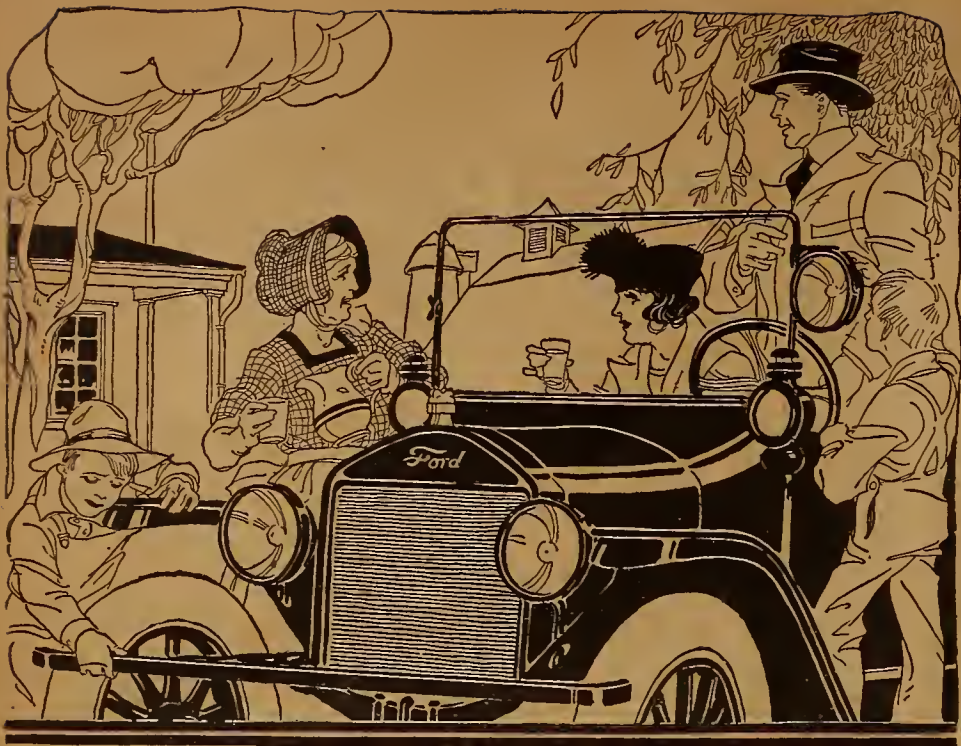
"Dana P. Smith,
County Road Engineer."

The use of Tarvia will give any community or state all-the-year-round roads that are dustless in summer, mudless in spring and fall, frost-proof in winter, and that are easy to maintain at a low cost.

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What I Have Learned from Six Years as a Sagebrush Settler

[CONTINUED FROM PAGE 15]

running short. Although my credit was good at the grocery and hardware stores, I couldn't plant groceries or hardware. I needed 75 pounds of alfalfa seed, which would cost \$15; to secure the seed I had to make a payment down of at least \$5. Five dollars! The amount was so small it was irritating.

My tools I could not sell; they were essential. I had borrowed money from my friends back East until they no longer wrote to me. I should have hired out to work, but my neighbors had no more money to pay wages than I had. And without that alfalfa seed I was gone.

Just as things were looking blackest, Chub, one of my two horses, took sick with impaction. I had had no grain to feed him that first winter—nothing but straight alfalfa hay, not of the best quality. I can't write of those three days he was sick, or of the utter hopelessness that seized upon me. What was I to do? How was I to farm with 40 cents in the bank and only one

you'd 'a' got a crop of grain from the land." "But," I objected, "the government bulletin says alfalfa does better without a nurse crop."

Otto spat contemptuously. "I saw you reading your bulletin. Where was that bulletin made?—on the Salmon tract? Not much! It was made up at Moscow, where the soil and the climate are plumb different. Hard-headed farmers have proved that alfalfa *does* need a nurse crop when it's planted in the Twin Falls district. Use your brains, son, when you read government bulletins."

My other nine acres, which I had cleared during the winter, I put in oats that second summer. I threshed 450 bushels in the fall. It brought me \$335. I was safe, on slim going, for another year. But how far behind my schedule!

During the summer I also dug a cistern and cleared thirteen more acres of brush and rock. Again I went out with the thrasher, and earned enough to pay my



Me and two of my best pals

horse? Big, clumsy, gentle-eyed Chub! The morning after Chub died I did a thing I would give much to forget. I skinned Chub, and sold the hide for \$6. My alfalfa seed was safe.

For my plowing I borrowed a horse from one of the neighbors who had more stock than he needed.

I hitched up to the buckboard one morning to drive to Hagerman Valley. Otto Travers came along as I was getting in, and I invited him to ride. Travers and I had revised our estimates of each other and had become good friends.

We stopped for an hour near the Oregon Short Line, to watch two trains being loaded with sheep.

The loading of the sheep was tame. The animals followed the leader with the greatest willingness and apparent satisfaction.

"Them's sheep," said my companion. "Of course they're sheep," I laughed. "Don't you see what they're like?" "No, nothing in particular." "Well," drawled Otto, "you will in time. You'll see it sudden-like."

When I came to sow my alfalfa I was advised by my neighbors to sow wheat or oats with it, for a nurse crop. But my government bulletin on alfalfa stated explicitly that the chances for a stand of grass were better without a nurse crop. Now, in my eyes, government bulletins were infallible. I sowed my alfalfa alone. The plants came up splendidly; it was what the neighbors called a "perfect stand."

In two weeks or so, about the time the hot weather began, I noticed the stalks of the plants turning yellow. I found, too, that, while the soil underneath was moist, a crust had formed on the surface. A few days more and the plants began to whiten and curl up. I went to Otto Travers for advice.

"The crust," explained Otto, "is smothering the baby plants. The air and sunlight can't get into the soil."

"What can I do for it?"

"You can't do nothing. You'll have to wait till next year, and plant it over again. If you'd planted a nurse crop of grain with it, it would've shaded the ground and kept the sun from baking the crust. Besides,

note at the bank and to buy a three-year-old colt. Next year—next year I must catch up!

During the following winter something happened. Potatoes went to \$1.50 a hundred, a price that meant an average gross return to the farmer of \$300 an acre. Alfalfa, meanwhile, became a drug on the market, selling for \$4 a ton in the stack. This coincidence was overwhelming. The third spring much alfalfa land was plowed up throughout the Twin Falls district, and replaced by a great acreage of potatoes.

All my neighbors were doing it, and they were doing it whole-heartedly. I fell in line.

I put in 15 acres of potatoes, mortgaging my team to buy the seed. I also replanted my seven acres of alfalfa—with a nurse crop. The alfalfa made a fine stand, but, of course, would produce no hay until the following year. The potatoes were fine, large, and plentiful; the price was not. The price was 25 cents a hundred!

I sat down and began to figure what it would cost me to put my crop of potatoes on board the cars at Twin Falls. I should have to rent a digger and a sorter and three extra horses. I should have to hire five men and board them. To three of the men I must pay \$2.75 a day; to the other two, five cents a sack for picking the potatoes from the ground after they were dug. I must pay 10 cents apiece for the sacks and 10 cents a hundred to have the potatoes hauled to town. I stopped figuring. The market price of 25 cents was not enough to go round.

I was not the only one that was caught. Hundreds of acres of potatoes over the tract were left to freeze and rot in the ground because it did not pay to dig them. The big money that year was made by a small minority of the farmers in clover seed. Clover seed made from \$50 to \$100 an acre—sure money.

I decided to put in clover the next spring. But I did dig my potatoes. I dug them—1,500 sacks of them—and put them into big pits in the field. And as I covered them with dirt to a depth of eighteen inches it seemed as if I buried with them something of my youth. Daily I went out into the

field and stared at the result of my year's work, three mounds of dirt—1,500 sacks of potatoes that were not wanted.

Then, one crisp October morning, I had an idea. I sold the oats—the nurse crop from the seven-acre alfalfa field—and bought 40 shots at four cents a pound. On the strength of this purchase I had my note at the bank extended. The banker was a kindly old soul, very reasonable and very sympathetic. There was no great hurry, he said, so long as I paid my 12 per cent interest. I could comprehend that.

I made a cooker from a discarded tank I found in the city dump, and began to boil potatoes for my pigs. And the rabbits were fat that fall! Each evening I opened a corner in my west fence, and during the night the rabbits would troop in to feed on young alfalfa. Before daylight I would sneak out and close the opening, then turn my two dogs loose. They killed from 10 to 25 big jacks every morning. Boiled rabbits and the boiled potatoes, with a dash of grain, put weight on those 40 shots with remarkable rapidity. You could see them grow. At the holidays they weighed around 280 pounds each.

And then, for some reason I could never quite fathom, unless it were that the packers' consciences were troubling them, the price of hogs jumped from 4 cents to 8½ cents a pound. I sold my herd for \$958.

I had done pretty well, I told myself, at the end of that third season. After paying the most pressing of my debts, I had \$50 in cash. Twenty-five acres were cleared of rock and brush, and I had three sides of my place fenced. That was pretty fair, pretty fair, but—I couldn't forget my schedule. If I was not mistaken, that schedule called for the paying off of the water contract this year—\$1,500 and interest. Anyhow, next year—next year I would make a killing!

In the spring, naturally, thousands of acres of clover were planted. I put in seven acres of it myself, on a piece of ground that was too rocky to plow. I compromised by hauling off the rocks that were on top, going over the ground with a disk harrow, and sowing the seed broadcast. I believe I was the only farmer on the Salmon tract to get a stand of clover that year. I should like to lay credit to my superior intelligence, but there are too many that know the facts.

The Twin Falls tract, to the north of us, had plenty of water, but our Salmon tract was short. The water company delivered through our headgates barely eight inches of water in place of the thirty inches we were paying for. Now, the rest of the farmers had put in grain with their clover, and the grain took all the moisture. But in my clover patch, which had been too rocky to plow for grain, weeds came up—sturdy, vigorous plants, mostly wild mustard. That mustard grew to maturity in early summer, using the spring moisture stored in the ground. After that the stalks remained standing, to shade the young clover like the finest nurse crop in the world; what is more, they took no more moisture from the ground. I saved my irrigation water until after the weeds had ripened; the clover got all the benefit.

He Learns What Sheep Are

Eight tons of hay I cut from my seven acres of alfalfa—almost enough to do me through the winter. After four years of buying and hauling—heavens, but I was proud of that first load of hay!

And now I came to figure up at the end of my fourth year. I had not paid a cent on my contract to the water company, and the interest was piling up at an alarming rate. I was \$300 in debt. I was more determined than ever to find out whether the trouble was with me or with this business of farming.

Alfalfa had been getting steadily higher. It went to \$12 a ton the following winter. I was surprised to find, when plowing time came, that the farmers were again plowing up their hayfields. A sugar factory had been built in Twin Falls during the winter, and everybody was going to put in beets. But to plow up more alfalfa! I could not understand it. Dwelling, one afternoon, on this puzzling fact, my mind went back to that incident of the sheep-loading and to Otto: "You'll see it sudden like."

I happened to meet Otto the next day. "Otto," I said impressively, "I want to ask you something. When a farmer happens to hit the market with a certain crop, why do all the farmers plant that particular crop the next year?"

Otto screwed up his pale blue eyes and chuckled: "Oh, you got it, did you?"

"No, but I haven't got it. I can't make it out at all. Now, why do we farmers do that?"

"Them's sheep," said Otto.

Otto had it right. There were farmers, of course, who were exceptions. Invariably these exceptions were men who thought beyond the limits of their farm and neighborhood. They were men who discovered new crops adapted to this new land; men who watched the world markets of supply and demand. Luck, we called it, when they made big money on some one crop.

I sowed 10 acres more of alfalfa, with oats, the fifth spring. The price of hay was, to a large extent, fixed locally; and the way alfalfa fields were being plowed up, there was no earthly reason why the price should not be high for three years to come. This was the first time in four years I had used my reasoning powers to connect the present with the future.

Then He Bought More Land

I mowed the weeds on my clover patch and tended the field carefully. Clover seed had been a great success the previous year, and the farmers with new stands of clover began figuring what their profits were going to be. I figured mine too. Five hundred dollars was the least I would take for my crop.

The seed formed full and plump; its development was not affected by the aphids. But at hulling time there was much swearing. The honeydew, thick and viscous, gummed up the machine, collected in mats on the screens, and came out with the seed in big balls. The average yield of seed was one bushel to the acre, when it should have been five to seven bushels.

I did a little better than the average; my seven acres made 10 bushels. This 10 bushels, with my oats and a few tons of hay I did not need myself, brought me \$600 for my fifth year's work.

From my \$600 I paid some of my bills. There was \$30 left. I had made very few improvements on the place the last two years, and I had not paid a cent on the water contract. Truly, I had done well to discard my schedule!

The spring of my sixth year I was not rushed with work, as most of my farming land was in grass. I had plenty of time to think. I was farming 28 acres of my forty, the other twelve being too rocky to touch. I could make a living on this 28 acres and, by planting the right crops, I might perhaps make a little more than a living. But handling 28 acres of field crops is hardly considered a man's job. I had taken a mighty unpromising piece of ground and converted it into something like a home. So far I had made good. But if I really wanted to farm I must get a larger place.

I decided to buy an 80-acre farm on the Twin Falls tract—provided I had a good hay crop this year, and the price fulfilled my expectations.

Otto Travers came to work for me during haying time. We were stacking hay one day, and I was complaining of the heat, and the hard work, and various other things.

"You oughtn't to be out in the brush this way, Bill," said Otto. "You wasn't meant to live so near the edges. You ought to be down on the other tract where there's more people. Get you a nice place down there, and then you can rent this place to me next year."

The idea of renting the place to him appealed to me. We sat down on the shady side of the stack, talked over the terms of the rental, and shook hands on the bargain.

"You'd better let me come along with you," he said, as he climbed back on the stack, "when you go prospecting for your new place. I'll help you pick out a good place."

"Nothing doing, Otto," I replied. "I want to keep you for a friend."

The hay turned out well. After the third cutting I had 120 tons in the stack. The price went to \$20 a ton. I sold mine for \$17—how was I to know it would go to twenty? But even at \$17 a ton I considered my judgment vindicated.

I found 80 acres on the Twin Falls tract that suited me, and from my alfalfa money paid \$1,200 down on it. I intend to keep 20 acres of the eighty in alfalfa, and to practice diversified farming. My farm has a gilt-edged water right; it is in a thickly settled district; there are no rabbits near. Incidentally, there are no rocks.

I have gone back to reading the government bulletins; but, while I read, I try to follow Otto's advice—to use my brains. The nature of the crops I plant will depend only partly on the fads and fashions of my neighbors. I shall try to look beyond my own eighty, beyond my own neighborhood, and beyond my own State. I shall keep on learning, I hope, new things about this interesting business of farming, sometimes by seeing others slip and stumble, but more often by getting a good hard fall myself.

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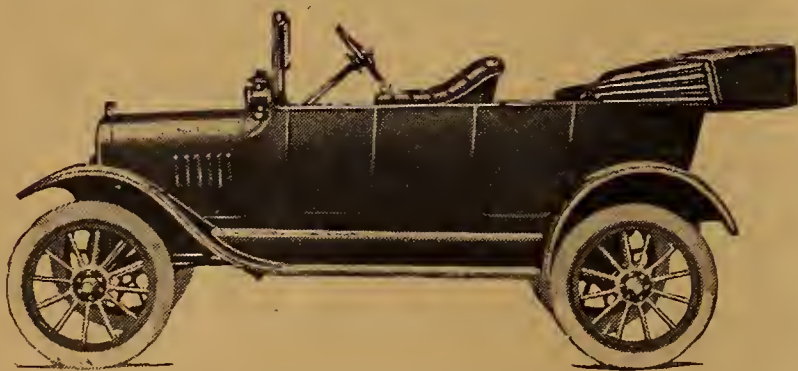
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Where You and I Have Got the City Fellows Licked

[CONTINUED FROM PAGE 10]

themselves about him as comfortably as the coats of many discolorings that are mine in Foxboro; nor can he, by any ingenuity, contrive to wear more than one suit at once. Poor little rich man, I say to myself; poor hard-working little man, slaving away for these masters of yours—your valet and your butler and your gardener—would that I might take you away for a week-end and teach you the ways of wisdom!

For you and I would sleep in a hard bed, in Foxboro, that would be soft as the petals of roses, because we had worked and sweated all day, and are honestly tired out. And in the morning we would be summoned by the most magnificent valet in the world, whose name is Apollo, god of light; rising at his call, we would clothe ourselves in bathing suits of the vintage of 1897, or thereabouts, and, issuing forth from our front door, while all the birds joined in a triumphal chorus in our honor, we would plunge into the

thought for the things of itself. Sufficient unto the day is the evil thereof."

I say that very often, and as I have looked at the worried, haggard faces of rich men, I have wished that I might take every millionaire—one at a time—for a few days of hard work and quiet in Foxboro. The world would be a better world if all the so-called owners of it could learn the lessons that our lake and garden and our flowers have to teach.

Ours are not the most fertile acres in the world. Someone has made the slanderous assertion that the Pilgrim Fathers never would have landed in New England if they had not been seasick; and, while every loyal New Englander denies that foul aspersion, we will admit that certain other sections of the country yield a little larger average crop to the acre. Nevertheless, we do raise at Foxboro some crops of infinite worth.

And first of all among these crops I should list a certain glorious sense of inde-



Here is "Mike" Barton in front of "the ancestral home" at Foxboro

waters of our own little lake, and emerge with such a sense of physical well-being as no wealth can ever buy.

And after breakfast we would sally forth across our domain. Perhaps it would be our day for gardening; and, if so, we would seize our tools and, while the sun beat down upon our necks, pouring the health-giving forces of the universe into us, we would spade, and hoe, and think great thoughts, and hold high converse together.

"The love of dirt," says Charles Dudley Warner, "is among the earliest of passions as it is the latest. Mud pies gratify one of our first and best instincts. So long as we are dirty we are pure. Fondness for the ground comes back to a man after he has run the round of pleasures, eaten dirt, and sowed wild oats, drifted around the world, and taken the wind of all its moods.

"The man who has planted a garden feels that he has done something for the good of the world. It is not simply beets and potatoes and string beans that one raises in a well-kept garden. There is life in the ground. It goes into the seeds; and it also, when stirred up, goes into the man who stirs it."

Perhaps it would be our day for fishing, and while we sat on the borders of the lake we would listen to the lessons that the Creator of the universe reserves exclusively for the quiet and solitary places, and will not under any circumstances impart amid the whirl and distractions of a city. Or maybe it is merely a day for moving about among the flowers and hearkening to their message. One hears it best by lying flat upon his back; for the voices of flowers are soft and low, and he must humble himself who would catch their accents. To one in such a position the blossoms bend their heads and whisper:

"Consider the lilies of the field, how they grow: they toil not, neither do they spin. And yet I say unto you, That even Solomon in all his glory was not arrayed like one of these. Wherefore, if God so clothe the grass of the field, which to-day is, and to-morrow is cast into the oven, shall he not much more clothe you, O ye of little faith? . . . Take therefore no thought for the morrow; for the morrow shall take

pendence. It is a crop whose blessings extend clear through the years. Often in winter when I am hurrying home through the lighted streets I look at the crowds of my fellow commuters with a certain high superiority. Poor folk, I say to myself; poor dependent folk, dealing in nothing but figures, in balances and profit and loss statements—what would happen to you if, for a single season, all of us farmers were to quit work and move to town? You are hurrying home to dinners that your hands have not wrought, while I—I know that we are to have beans that last summer I raised with mine own toil and perspiration, and helped my wife to can in the kitchen of our little white cottage.

Not for any wealth or office would I surrender that proud feeling. It is a shock absorber that carries me gayly over all sorts of bumps. What can fate or circumstance do to me? Take away my job? I have another job in Foxboro. Rob me of my savings? I have a bank that needs only a little work in the sunshine to yield me everything necessary for maintaining life. I have conquered the world; I have banished fear from its face forever; for, if need be, I know that I can delve in the earth and find there support for myself and my children.

That is the first great fruit of Foxboro; and the second is children. All around me in New York I see children growing up whose parents confess bitterly that they are "such a problem." Our children are no problem. For four months of the year we turn them out, barefooted, to soak health into their systems through the pores of their feet, and to learn the priceless gift of finding pleasure in simple things. Even New York cannot break down in eight months what Foxboro builds up in four. We have almost no sickness at our house. Nor any of that sickness of the soul that comes from envying the more material possessions of other folks. A water wheel, fashioned by Daddy from an old grocery box, and set up triumphantly in the brook, is a thing more to be desired than a new limousine, and an old fishing pole than soft raiment or precious jewels.

It is not by chance, I think, that so many of our great men and women have come from the farms. There, as children, they share the companionship of their parents instead of the companionship of hired servants; they build into their frames the sturdy health which is the foundation of almost every big success; and, walking much alone in the fields, they learn a sturdy self-reliance, and a humble faith in the All-seeing One who creates man in His own image, and so powerfully protects those who put their lives into unison with His will.

Our third great crop is a corrected perspective on this tumultuous and dazzling world. It is so easy to become distracted in the midst of a great city—so almost inevitable that the petty concerns of every day should assume a false importance. There are times when the little cares of my office seem monumental; when I actually forget that it really makes no difference whether my income is a few dollars more or less this month than it happened to be last. At such times Foxboro is a cure beyond all price. Leaving New York, and arriving there in the evening, I walk out under the stars that have looked down upon the little worries of so many million men untroubled, and will look down upon so many millions more when I am gone; I lift my eyes to the hills, silent, reposeful, eternal—and at once all the trivial concerns of New York vanish like dew before the sunrise. I say to myself: "Thou fool, what a wicked waste of precious hours to spend any of them in worry! Nothing in New York really matters. Only health, and the love of a wife and children, and the capacity for doing as well as you can the thing you have to do—only these really matter."

Which brings me to the mention of my fourth crop—the fine sense that only us farmers enjoy, of being fellow workers with God in the business of creating in the world.

"I have traveled very widely," said Thoreau, "in Concord." I, too, have

traveled very widely—in Foxboro. It may be that Europe has something to offer in the way of wonders that we do not have in Foxboro, but the longer I live the more I am inclined to doubt it. They have many old churches, in a bad state of repair; we too have churches, none too well kept up. They have larger parks than we, but we have our common. They have men famed for wisdom, but at our paper store, at night, one may wait for the Boston papers and converse with men in whom is all the philosophy of the ages. Perhaps I shall go to Europe some day, but I rather dread the ordeal, knowing how much I must be disappointed. For it cannot, after all, be very different from Foxboro—and I am at home in Foxboro.

I have spoken of my cottage as my "ancestral home," and so it is. "Since we did not have any ancestors with wisdom enough to live five or six generations in a spot like this," I say to my wife, "then, perforce, we will be ancestors. This is our ancestral home; by the time our grandchildren begin to come up here for their summer vacations it will have been in our family for a great many years."

And, indeed, America needs nothing so much as more ancestral homes, more riveting of families to a common spot.

We shall have a better country, a finer patriotism, and a larger, more exalted sense of responsibility, as we form the habit in America of clinging through many generations to the same spot of land.

The city may be well enough as a place to be young in, but it is nothing for the years of wisdom that come with the mellowing of age. Old age is less fearsome in the country; death is easier and more natural—even as the blossom ripens into the fruit, and the fruit softens and drops quietly into the warm, outstretched arms of Nature that gave it birth. And Enoch, I believe, must have been a farmer; for we have no record that he ever died, in the sense in which we know the term. Of him it is written instead that "he walked with God, and he was not, for God took him."

Things You Should Know

[CONTINUED FROM PAGE 13]

expect. And, as a further substantiation of what I am saying, I have from one of the largest egg farmers in the Middle West, over his own signature, figures to show that he got even less percentages than I, though he had them in units of 1,000.

I broke even, year after year, approximately, for six consecutive seasons, after giving my entire time to it, doing all the work myself. When I had decided to quit I had paid out about \$400 on permanent investment, and owed \$300 at the bank, borrowed to tide over the fall months when no eggs were coming. I sold the hens and equipment down to farm flock size for both, put money in horses and tools, and began to follow the plow.

All these years I had a living from income outside of hens, though of course we bought no eggs or chickens in that time, and the farm was bought with money made before this work began. Under conditions as I found them I feel justified in concluding that every man who has a hankering after egg-farming (I am writing of that side of the work only) ought to know and study what follows:

1. That, since the "memory of man runneth not to the contrary," men have been retiring in late life to suburbs to make an easy living with poultry, only to find themselves back on the farm as soon as "they found out."

2. If I take a bunch of hens on a new place, say January 1st, give them good care, get a good yield, and rush to the papers to tell what I have done up to September 1st, I tell only part of a truth; for at that time the best has been done, according to all proof, and if I had waited until the year was out the papers would never have heard the tale. It was truth, but misleading. Hens by hundreds will not do as well as a few.

3. Percentages of laying run most everywhere, in commercial poultry, as per the table herewith. Fifty to sixty per cent being the best, and as low as ten per cent.

4. Hens lay fine from December or January to June, then go back at a faster ratio than they went up. Upward three months, down six months, "dry" three months. A hen cannot grow a new coating of feathers and lay, feed her ever so well. If you hatch Leghorns in February and March to lay while old hens molt, they

will lay irregularly for a while, then they go into molt.

5. Hatching incubator chicks is a fascinating toil, and has to be a large part of the work on all egg farms, for it is absolutely necessary to have pullets to get eggs.

6. One Dr. Pride wrote a bulletin on white diarrhoea which I wish every man with "poultry fever" could read (I have lost mine), for if that had fallen into my hands before I was inoculated I tell you now I never would have begun. Pride is the only man I know who told the truth. Read it if you can. He said the plague is incurable. The government bulletins tell you there is no cure.

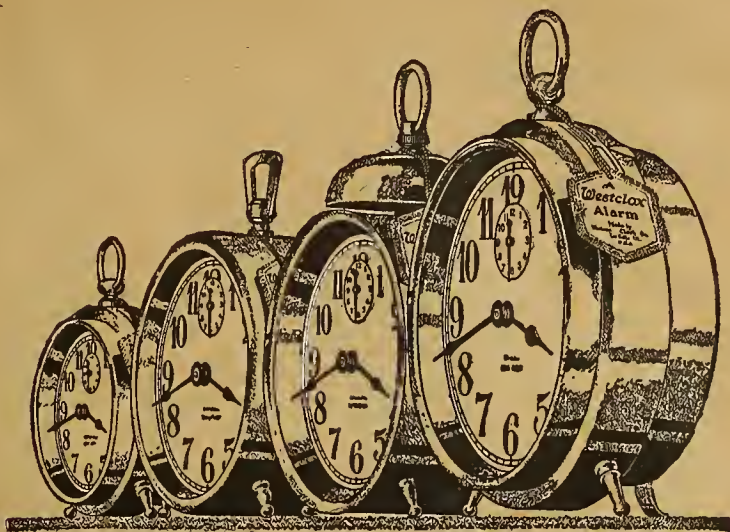
7. Loss by death from the time the pullets (with me) were two pounds weight till the end of the first laying year ran from seven to ten per cent. Many died from want of stamina, roup killed some, some bled to death from cut combs, some died of apoplexy on the laying nest.

8. Working an egg farm is a 365-day job, if you do your duty as I did. Running incubators, tending brooders, feeding chicks, feeding hens, watering, cleaning roosts, hauling feed, working garden, doing the chores, you will be so dirty your wife, if as clean as mine, will object to your getting in her clean bed—take my word for it.

It accidentally fell into my hands about the time I was closing out that, on a circular inquiry, 326 poultrymen answered the question, "What are the two main drawbacks to egg farming?" the same way, namely: "The rearing of enough pullets to take the place of old hens, and getting the hens to lay in the fall." I found it the same way, though I was not asked the question. All of the 326 ought to have also said that the common barnyard fowl lays the egg that sets the price over all eggs.

Jan.....	2,098	July.....	5,060
Feb.....	6,026	Aug.....	2,971
Mar.....	9,694	Sept.....	1,409
Apr.....	11,188	Oct.....	616
May.....	9,330	Nov.....	626
June.....	5,141	Dec.....	734

Table showing high and low egg yield of 750 hens and pullets in units of 150 to 200 in open-front houses 10x50 feet on a North Carolina egg farm



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Fine Breeds Poultry, Turkeys, Geese, Ducks, Guinea; Bantams, Hares, Pigeons, Dogs, Stock, Hatching Eggs specialty reasonable. Pioneer Farm, Telford, Pa.

Baby Chicks 10,000 each week after March 15th. 20 varieties, utility and exhibition stock. \$14.00 per 100 up. Circular and price list free. Stamps appreciated. Spencer Hatchery, Spencer, O.

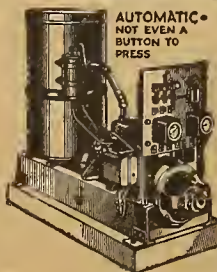
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We bought a lot of these watches from a concern that was overstocked. We paid less than the market price, and now we have organized this Watch Club for *Farm and Fireside* boys and will give one to each fellow who will do a little hustling for himself and *Farm and Fireside*.

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Has a white enameled dial, polished nickel case and, besides being a dandy good-looker, keeps fine time. And you can get it just as easy—

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The Watch Club F.F. 6-19
Farm and Fireside, Springfield, Ohio
Please tell me how I can earn a watch.
Name
P. O.
St. State

Hendricks Hobbies

By W. L. Nelson

J. P. HENDRICKS is a corn-belt farmer who was once looked upon as a crank by some of his skeptical neighbors who "just didn't see any sense" in plowing corn after every rain. But all the time, despite some derision and many good-natured banterings, Hendricks kept on, even going so far as to cultivate corn with a sulky hay rake—and he is still putting this Maud Muller machine to the same good use.

When we visited the Hendricks farm of 240 acres, the sulky rake was standing at the side of a 40-acre field of almost knee-high corn. In two days one man had gone over the field with this rake, the teeth of which were fastened down so as better to break up the crust left by a hard shower, and had left as fine a dust mulch as anyone could wish for. "Yes," said Mr. Hendricks, "that old rake has saved me thousands of barrels of water and hundreds of bushels of corn."

Now, let nobody imagine that it would pay to put a hay rake to such use in every field. In fields where the sweet-potato-row method, instead of level cultivation, is followed, or where the soil has been allowed to become "hard as a road," such attempted use would be folly. On the Hendricks farm, though, it works fine.

Same Method for Twenty Years

This leads us up to the Hendricks method of corn cultivation. In brief, it is level plowing, but deep enough to provide the finest and mellowest dust mulch we have ever seen in a field, and all the fields—there were 87 acres in corn—were similar in soil condition. This was true regardless of whether the corn followed corn, rye, or cowpeas. Incidentally, let it be said just here that Mr. Hendricks has been following his present method of corn cultivation for more than 20 years, and that he has found it adapted alike to bottom and prairie land. With him it is no passing fad.

At the time we visited the farm, Mr. Hendricks was using a two-row riding surface cultivator which has been in use for nine years. This plow is provided with no shovels, but instead there are eight knives, each about two feet long and four inches wide; that is, they were four inches wide when new, but much use has narrowed them, especially toward the ends that are set to run deepest. Following these knives, which may easily be regulated by means of levers, are steel drags provided with teeth about the size of forty-penny nails.

With this outfit Mr. Hendricks cultivates an average of 16 acres a day, and does as good a job as we have ever seen in any field. It is literally true that one almost mires down in the mellow earth, which is deepest near the center of the rows. In order that all weeds may be removed, for the best of plows will miss a few, Mr. Hendricks carries in one hand a small, short-handled hoe. With this he chops out any scattering weeds which may have been missed. While 16 acres is counted an average day's plowing, a record of 25 acres was once made with this plow.

In the field with Mr. Hendricks at the time we visited his place was a fifteen-year-old boy who was using a single-row

riding cultivator of the surface pattern. He, too, was cutting out all the weeds, leaving only the corn and cowpeas which were growing in the rows. This man and boy not only cultivate all the corn on the farm, but look after other work, including a large garden and truck patch.

In addition to a big Irish potato acreage, there are 1,000 sweet potato plants and 1,000 tomato plants. Yet work on this farm does not seem to be specially rushing. There is system and time-saving. For instance, the sweet-potato plants, instead of being planted in short rows, are in two long rows extending almost across the field. This method makes possible much cultivation by means of a plow instead of hoe.

Tomato plants are set by means of a "jabber," or spear. This is really a heavy iron rod, pointed, and four feet long. At the upper end is a hand hold, while about 18 inches from the pointed end is an extension for the foot. This arrangement enables the user to stick the iron into the ground the desired depth without any trouble. One or two rapid turns and the hole is made, with a good mulch foundation ready prepared.

Into this the tomato plants go without water. In filling the hole the spear is stuck into the ground at an angle of about 40 degrees and the loose dirt turned over toward the plant. With this method one man has set 1,000 tomato plants between supper-time and dark.

Much of the breaking of ground on the Hendricks farm is done with a gang having two 12-inch disks. With this implement, drawn by five horses abreast, Mr. Hendricks has plowed 40 acres in 6½ days, breaking the ground to an average depth of 10 inches. With the addition of one mule pulling a small drag, hitched to the off mule of the team, all the plowed ground is double dragged at the same time. Surely this is a man-saving and time-saving method.

Let no one imagine that because of the economy of time and man power the work on this farm is carelessly done. Instead, we have never seen straighter corn rows or work done with more evident care. It is largely a matter of "taking time by the forelock," of pushing the work instead of letting the work push you. Two or three days before the corn comes up it is run over with a pulverizer at the rate of 20 to 25 acres a day.

Even in the simplest operations of the farm short-cuts are taken. In felling trees, for instance, the chopper girdles the entire tree, leaving the stump almost as level as if a saw had been used. "I adopted this method," said Mr. Hendricks, "by observing the work of a saw. We saw directly through a tree, this being the shortest possible distance. Cutting a tree by the old method means going the longest way round."

In these reconstruction days, when labor is scarce and time is such a large factor, it would seem that those of us who are unable to buy tractors or other large unit machinery might well pattern after the Hendricks method. To save time is wise economy. To conserve moisture is to take out the best of crop-insurance policies. These are the things that make farming profitable.



Steel drags, provided with long sharp teeth, follow the knives of the plow

Parcel-Post Marketing

By Chas. E. Richardson

I HAVE two businesslike, persevering friends who have made a success of parcel-post marketing. One of them keeps a herd of pure-bred cattle in a district far from cities. Creamery prices did not satisfy him, and he had no way of selling his whole milk. So he conceived the idea of a farm mail business in certified butter. He learned how to make certified butter of a high quality. From numerous manufacturers of paper and wooden shipping boxes he obtained samples and quotations, finally choosing a light wooden box of two-pounds capacity, manufactured in his vicinity. One dollar for two pounds appeared to him a not unreasonable charge, and that was the price he mentioned in his advertisements.

These advertisements he placed on the classified ad pages of high-class newspapers. They were short, six-line notices, but they were businesslike and to the point. When the advertisements had been running a month and a half, my friend wrote: "Results thus far are only partially satisfactory, but I believe a successful business can be developed if I give sufficient time and business effort to it. I mean to stick to it."

He made nothing on his parcel-post business in butter during the first six months, but all the time he was making headway. At the end of that time he had several permanent customers. Their number steadily increased. He took pains to sell extra-good butter.

Week after week it was of uniform quality. Eventually he discontinued advertising altogether, because he was getting more orders than he could fill. He is a successful parcel-post farmer to-day, and he would not think of marketing in any other way.

The other man, city-born, as a young man managed butter and egg stores. Consequently, he knows a good deal about retail market conditions and prices. On the farm he produces butter, eggs, and dressed poultry for parcel-post selling. A spring specialty which he makes much of is maple sugar and syrup.

The syrup from the home orchard this spring, besides much he bought of neigh-

bors, he sold for \$1.75 a gallon delivered; for sugar in 10-pound pails he got \$2. To local stores at this time other farmers were selling their syrup for \$1 to \$1.25 a gallon. Within the first two zones this mail-order farmer shipped by parcel post, in other zones by express. His syrup sales last year exceeded 200 gallons.

Yesterday I had a letter from him. "The parcel post can be made to do great wonders," he wrote. "Can be made!" He hit the nail on the head with those words. "As soon as the buying people realize they are sure of getting their goods, and getting good goods, their orders come thick and fast." This man knows much more about marketing than the average farmer, and he considers the parcel post indispensable.

There is no object in trying to build up a parcel-post business unless you have good stuff to sell. Without first-class goods you will not get repeat orders, and without repeat orders you cannot sell goods by mail at a profit.

Quality is one essential. Another is perseverance. The early days of a parcel-post business are the discouraging days. Remember you are building up a business for a lifetime, and it will pay to build well.

For the farmer who looks for quick results, the Thanksgiving and Christmas holidays furnish an opportunity. The right sort of an advertisement easily sells turkeys, chickens, and ducks at this time. Don't try to fill your advertisement with too many fancy words. In the early days of mail-marketing city people liked the sound of such words as "sweet," "exquisite," "delicious." Like sugar, such words are all right in small quantity, but city people are sick of them now; they have had too many.

So, in your advertisement say less about the flavor of your goods and more about the price and your business methods. By parcel post you can sell a given grade profitably far below the retail price, or at the retail price you can sell superlative goods. Make the consumer understand these things. You will sell goods by mail if you make your appeal not only to his palate but to his pocketbook.

Plowing for Profit

By R. B. Rushing

A TRACTOR built strong enough to withstand the heavy stresses and strains consequent upon field work can do a good job of plowing by hitching it to several ordinary horse gangs. These, however, do not give as good satisfaction as the special tractor plow, since they are not so compact in construction, are not so easily handled, and are not so completely under the control of the operator.

Personally, I have in time past used two types of tractors. One of these is 45 horsepower, the other 30 horsepower. I have used the latter size the past two seasons.

This engine is designed for general field work on small or large farms. I have been in the habit of pulling from three to six 14-inch plows. The tractor handles these very successfully to a depth of eight inches in all kinds of soil. I find from experience that this engine will use from two to two and one-half gallons of fuel to the acre, making the cost of operation quite low.

I find that one man with this tractor and the regular tractor plow is able to average from 10 to 15 acres a day. Two men will average from 15 to 20 acres a day. In one instance two men plowed 23 acres in 10 hours. I have found that this engine is able to plow when the ground is in fit condition to be worked at all.

There are many advantages gained by using such an outfit. The operator is able to turn off several times the work he could with a team, and does his plowing in a short time when the ground is in the best condition. This one thing alone should add materially to the productiveness of the field. I also find it quite practical to attach a harrow behind the plow so that the ground is harrowed when still moist, putting it in ideal condition to conserve the moisture.

These same general facts hold true when one is using an engine for disking, harrow-

ing, or harvesting. I do all these things with the tractor.

Last spring, after the rush of plowing was over, a man living some ten miles away sent word that he had 65 acres of sod which he would like to have me plow so he could plant corn. He offered me \$1.50 an acre and furnished the fuel and a man to help.

Before this job was done a neighbor of his said he had 20 acres of stubble land that had been so wet he could not get it plowed. It was reasonably dry now, and, as his men were all busy, he would like to have me plow it. The day we were plowing, the work looked so well to him that he decided to have a 30-acre field of sod plowed for the same purpose.

The result was that from these jobs I netted enough to go a good way toward paying the season's wages of the engine man. Since then the road boss has asked me to grade much of the road, and others have spoken for considerable plowing.

A Labor Card-Index

By L. H. Lane

IN ADDITION to the usual accounts and records of farm operations, I keep a card record regarding ranch help which shows when each man was hired, his nationality and age, his previous employer, his wages, the general class of work he performed, any increase in wages, his competence and disposition, when and why he left.

Any important facts that come to my certain knowledge are added—for instance, the fact that a man has a family—though I never question the men nor accept mere gossip.

This record has been useful in many cases.

PRINCE ALBERT



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Toppy red bags, tidy red tins, handsome pound and half-pound tin humidors—and—that classy, practical pound crystal glass humidor with sponge moistener top that keeps the tobacco in such perfect condition.

PLAY the smokegame with Prince Albert if you're hunting for tobacco that will cheer your smoke-appetite! For, with Prince Albert, you've got a new idea on the pipe question that frees you from stung tongue and dry throat worries! Made by our exclusive patented process, Prince Albert is free from bite and parch and hands you about the biggest lot of smokefun that ever was!

Prince Albert is a pippin of a pipe tobacco; it certainly does beat the band! And, what you're going to find out pretty quick thousands of men discovered as long as ten years ago when P. A. started a smoke revolution!

Get the idea that P. A. is simply everything that any man ever longed for in tobacco! You never will be willing to figure up the pleasure you've missed once you get that Prince Albert quality flavor and quality satisfaction! You'll talk kind words every time you fire up!

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"DON'T SHOUT"

"I hear you. I can hear now as well as anybody. 'How?' With the MORLEY PHONE. I've a pair in my ears now, but they are invisible. I would not know I had them in, myself, only that I hear all right."

"The Morley Phone for the DEAF"

is to the ears what glasses are to the eyes. Invisible, comfortable, weightless and harmless. Anyone can adjust it. Over one hundred thousand sold. Write for booklet and testimonials. THE MORLEY CO., Dept. 776, Perry Bldg., Phila.

CHEAPEST WAY TO GO

is on a bicycle—a dozen miles for a cent. That's why in Europe one in every six persons rides a bicycle. All armies use them by thousands. It is the workman's street car, with the cost of the rides saved. A complete outdoor gymnasium that keeps you fit in mind and muscle.

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Sales Plan Saves you \$10 to \$20 on all latest war approved Ranger models. 30 Days Free Trial and Free Delivery. TIRES Parts, Repairs at half usual prices. Don't buy until you get our Big Free Catalog describing all the wonderful new offers, liberal terms and low prices. Write a postal now.

MEAD CYCLE COMPANY
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Now is the Time to Buy a Farm in Good Old U.S.A.

Although the war is over, the demand for food continues. The business of producing things to eat, therefore, gives promise of paying satisfactory dividends.

The U. S. RAILROAD ADMINISTRATION offers the co-operation of its HOMESEEKERS BUREAU to those who wish to engage in farming, stockraising, dairying, poultry raising, fruit growing, and kindred pursuits. Free information will be furnished about farm opportunities in any State on request.

Write today. Give me the name of the State you want information about; say what line of farm activity you wish to follow, and the number of acres you will need, and let me know what kind of terms you desire. The more particulars you can send regarding your requirements, the better I can serve you.

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Sold Direct \$20.50 JUST the THING for SHOCK or SILO CUTTING

Works in any kind of soil. Cuts stalks, does not pull like other cutters. Absolutely no danger. Cuts Four to Seven Acres a Day with 1 man and 1 horse. Here is what one farmer says:

Gentlemen:—Have found the harvester to be a labor and a money saver. Filled an 85-ton silo with the help of a 10-year old boy. The corn was on a side hill and the piece was stony but the "Perfect" cut all the corn. Yours respectfully, H. S. ATWOOD, Watertown, Conn.

SOLD DIRECT TO THE FARMER

Send for booklet and circulars telling all about this labor-saving machine; also testimonials of many users.

LOVE MANUFACTURING COMPANY
Dept. 23 Lincoln, Ill.

Youth Writes a Letter to Love

[CONTINUED FROM PAGE 26]

she told him, "it's all the same. They use you as long as they want you and give you what they must, and that's the end of it; so, I say, get as much as you can out of them, and don't work any harder than you have to."

"How old are you?" he asked sharply. "Twenty-four," she replied promptly, though puzzled.

He drew in a whistling breath.

"Gee!" he ejaculated. "As young as that! Then it's one of three things: your shoes are too tight, or you have indigestion, or you have had a scrap with your beau."

"It's not any of them," she defended herself.

She could not, if she would, have told him the truth. Muggins was no seminar psychology student. She was only vaguely aware that she was sick of the business of nursing other women's babies for them, restoring other women's husbands to health, working always for other women's happiness and getting nothing out of it herself but her thirty a week.

"Why did you go into nursing?" he demanded.

The psychology student which Muggins was not would have said that what she wanted, what her hungry heart craved, was to be in things, to find the emotional life that she needed; and that, after all, what she had found was only a place on the outskirts of other folks' emotional life. Muggins, being what she was, blurted out something comprehensible and not true.

"It looked like good money," she said. "But I guess the rooming house is better."

He contemplated her thoughtfully.

"It will get you yet," he mused.

"What?"

"The war."

She shook her head skeptically.

Then they went together to the sick-room, forgetting completely that he had asked a question that had not been answered.

Nor did they remember it when Dr. Biggins returned a second time that day. The cause of his visit was Godfrey. Mrs. Hammond had felt uneasy about him all evening. He looked feverish and really ill, although he kept assuring her that he was quite all right. There was nothing, of course, that he could tell her about the cause of his misery. She did not even know that a certain stationer in the town had a lovely daughter Mary who sometimes deigned to exchange magazines for small coins when her father was out or busy; nor would she have understood had she known. What she thought of was bronchitis, and when she finally called the nurse to take the boy's temperature the little thermometer gave so alarming a report that the doctor was summoned at once. He talked vaguely of acute gastritis or a little cold, and finally admitted that he couldn't be sure until morning.

But outside of the sick-room he wondered to Mrs. Hammond whether he might have had some sort of an upset.

"Upset stomach?" inquired Mrs. Hammond. "Something he's eaten?"

"Well, that, of course," said Dr. Biggins; "but I was wondering if he might have had—might have had—some sort of emotional shock."

Mrs. Hammond stopped being worried long enough to laugh.

"Well, his college report gave his father and me an emotional shock! But it didn't give him one! And his tire bill too. Indeed, I wish that had upset him a little."

So he gave his orders to the nurse, and the convalescent little Hammonds were left that night to the care of nursemaid and governess, while Muggins was officially installed in Godfrey's room, to which a cot had been brought for her use.

But she sat up a while to keep an eye on him, for he was tossing feverishly upon his bed. Shading the drop light so that it would not disturb the patient, she took up her leather writing pad and the letter she had started that afternoon to her sister. She looked up from her paper at the end of each line or so, to make sure that the patient did not need her.

The letter progressed rapidly, for she found herself able to think more clearly, in this immense midnight stillness of the house, than she had done yesterday with all the afternoon's distractions about her. "I cannot see," she wrote, "that there is more money in it than in nursing."

She paused and stared dreamily into space. After all, what was there to gain by the change? Then she went on:

"That is, after you have paid the help and the coal and the electricity and the rent and the upkeep generally; that is, not unless you called it a sanatorium or a rest house and charged fancy prices. But I will come out and look it over, because if it pays better I want to go into it. I think it would be easier, on the whole."

Then she asked about the children, and told about some twelve and a half cent initial handkerchiefs she had bought at a sale, and signed herself, "Your affectionate sister."

And then, because her patient seemed quiet, she turned out the light and lay down on her cot. Lying there, she thought about her shoes that needed half-soleing; and she wondered whether when she was fifty she'd still be nursing or still be keeping a rooming house; and then she reminded herself that she'd better not order any new uniforms until she decided— "Mary!" cried the voice from the bed.

For a moment she was too startled even to rise. After all her experience as a nurse she would have thought that nothing could startle her; and yet

that simple name called to her across the room almost paralyzed her. How did he know that her name was Mary? Aside from the teachers in school, no one had ever called her that. To her family she was Mame; to the Hammond family she was Muggins; to the rest of the world Miss Hopkins.

"Mary!" called the voice again—this time with a strangely beseeching note in it.

Hastily she rose and crossed the darkened room to his bed.

She brought him a glass of water, and after he had taken it his hand reached out and clung convulsively to hers. So she seated herself on the chair beside the bed. The boy was quiet now, except that his hand kept its feverish grasp on her own, giving it a queer sensation, more accustomed as it was to mustard plasters and thermometers and hot-water bottles than the strong, slim hand of a boy.

"Mary."

In the darkness she bent toward him a little.

"Yes?" she questioned soothingly.

"You say 'Yes', just like that," he reproached her bitterly. "'Yes'—that's all you say."

"What did you want me to say?" she asked him in her conciliatory voice.

"You might at least say, 'Yes, dear.'"

For Muggins it was like a sudden plunge into ice-cold water, making her gasp.

He flung her hand from him.

"You don't care," he admonished her bitterly.

A sudden glory of tenderness filled her heart. She bent over him.

"I do care," she declared truthfully.

He sought her hand again, and clung to it satisfied.

Finally one of Muggins' strong hands released the fingers that so convulsively imprisoned her other hand; and then, just as she had her two hands safely again in her lap, she heard a soft step reach the door, heard the sound of a turned knob, and the click of the electric light button, which flooded the room with a blinding brilliance.

Mrs. Hammond, very gorgeous in her blue-and-silver negligee, stood at the foot of the bed, looking at her son.

"I thought I heard his voice," she explained. "Isn't he any better?"

"He's very restless," Muggins told her, "and the fever hasn't subsided much."

At the sound of her voice the boy turned heavily over on his side.

"Mary!" he called again, fretfully.

Muggins' hand went to the table beside her to steady herself.

Mrs. Hammond looked at her curiously. "Does he mean you?" she inquired.

"He's been calling me that this evening," Muggins temporized.

"Is Mary your name?"

She nodded.

Mrs. Hammond looked thoughtful. "I didn't know it was," she said. "They always just call you Muggins."

Then again came the voice of the fevered sick boy, this time startling them into silence.

For—"My dearest," the boy said in his broken delirious voice. "Oh, Mary dearest."

Mary Hopkins' mind went searching frantically for something to say. "I don't think—" she started to say, but didn't

finish it, for she did think that he meant it. It wasn't until later that she began to doubt; later, when Mrs. Hammond had gone with her icy disapproval, leaving them alone again, with the darkness of the room settled down upon them—the darkness out of which had come that one strange flash of romance. He was sleeping now over there. Muggins didn't sleep. How could she have slept? It's something you don't do when suddenly romance has flashed into a life of gray routine.

Only, had it flashed? That was the doubt that grew and grew. At first it was only a shadow of a doubt, for was not the sound of his "Mary dearest" still ringing in her ears, and the feel of his sinewy young hand still upon her own? But how could she know for sure? It was all so new, and she felt herself as ignorant about this sort of thing as the greenest little probationer in the hospital could be about anesthetics and hypodermics.

With dawn doubt had waxed into a great grim thing. How could it be true? They always said queer things with a temperature. And, anyhow, who could feel that way about her? Certainly no one like him. Only, dear God! she wanted it to be true. Let just that one little thing be true, and she would give her whole life to nursing other people's loved ones. When he should awake she would know for sure. But she was almost afraid to have him wake.

He was still sleeping when the maid came to summon Muggins to her breakfast.

Mrs. Hammond had always been patronizing and superior, but now there was a new and special chill about her manner. Muggins was well aware of it, and knew why it was there. But she went plodding somehow through grapefruit and soft-boiled eggs and toast, and managed to reply, "I think so," and "Yes, indeed," to Mrs. Hammond's conversation.

But when it was all over, even to finger bowls and folded napkins, Mrs. Hammond raised her eyebrows at her plate and said:

"Miss Hopkins" (Muggins felt a shiver run down her spine), "Miss Hopkins, a former nurse of ours, Miss Edmunds, will

be able to come to us this morning. Any time you can find it convenient to get your things ready, I can have James take you in the limousine wherever you want to go."

"I can be ready, Mrs. Hammond, in exactly twenty-five minutes," and, to herself, "There," she said. "There! I hope that's soon enough to suit her."

On the way to her room she had to pass Godfrey's door.

"Shall I go in now to say good-by?" she asked herself. And then it came to her that when she did that she would know for certain.

"I'll wait until I've packed," she thought, "and stop in as I am leaving."

She went on to her room and with those swift, capable hands of hers gathered together and packed her things in twenty minutes.

"Five minutes," she thought, "to say good-by and get down-stairs."

So she dropped her suitcase outside Godfrey's door, but when her hand was on the knob she hesitated.

"Shall I or shan't I?" she demanded of herself. "Quick—shall I or shan't I?"

And while she was hesitating there came the sound of Mrs. Hammond's voice in the hall below.

So her hand slipped away from the door knob. She picked up her suitcase and went silently down the stairs.

It was through Dr. Biggins that she kept track of Godfrey's convalescence, of his first day down-stairs, of his first ride in his car. And then, before you can believe it possible, came the news that he had enlisted.

And then he was gone without a good-by, without Muggins having a glimpse of him, without even a chance to know. Only, of course, she did know. Delirium, nothing but delirium. People say anything then.

The days went on, and she kept at her nursing, and kept putting off Bessie, and kept waiting, though she told herself flatly enough that she wasn't waiting.

Meanwhile, in Godfrey's home, his mother kept cherishing a resentment toward Muggins. Even when Godfrey, so innocently unaware of what upsetting words he had spoken in his delirium, had enlisted and gone to France, even then his mother's resentment persisted.

"They are all designing," she told her husband. "That's what they go into nursing for; and when a man is sick and weak and helpless, what can you expect?"

It is queer that even the last terrible news did not obliterate the mother's resentment. Following the news, there came in time the pitiful little bundle of Godfrey's possessions, including an old wallet which had belonged to Godfrey's grandfather and which the boy always carried with him. In the wallet was a picture of Godfrey's mother, taken when she was a child of ten; there were photographs, too, of his father and of his little brother and sister. In it they also found a letter, hastily written and a bit crumpled.

Mr. Hammond read the little letter—read it over twice, thoughtfully and gravely, before he handed it to his wife.

It took her no more than a moment, and then she dropped it into her lap, still keeping a tight hold upon it.

"She shan't have it," she declared with bitter heat. "Designing—she hasn't any right—"

Replied the boy's father:

"He wanted her to have it, and it is our last chance to do for him something he wanted done."

That was how Mary Hopkins happened to get the letter that was never intended for her. It came when she was on a case, and three hours passed before she found an opportunity to read it behind the closed door of her room, sobbing over it, though there was as much tenderness and adoration as grief in her tears, and a great joy in her breaking heart.

After a single reading she knew it by heart, and so could keep on reading it when her eyes were too tear-dimmed to see:

MARY DEAR: I don't think I'll ever see you again, but Love doesn't get shot down in the trenches. I want you to remember that always and always.

YOUR GODFREY.

And so, you see, it was the love of Godfrey Hammond for the stationer's unworthy Mary that gave all that courage and inspiration to Mary Hopkins the nurse, making her all that she has been in France.

Youth wrote a letter to Love, and the letter Youth wrote was delivered.



On the way to her room she had to pass Godfrey's door. "Shall I go in and say good-by?" she asked herself